JOURNAL

of the

AMERICAN PODIATRY ASSOCIATION

The Official Publication of the Podiatry-Chiropody Profession

INJECTION THERAPY

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VOLUME 48, NUMBER 11

NOVEMBER, 1958

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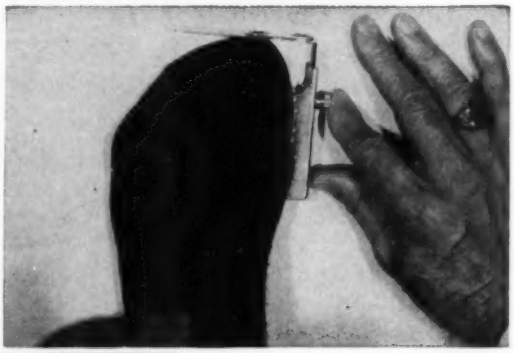

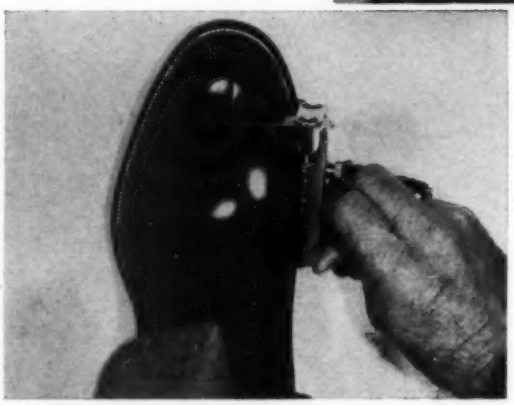

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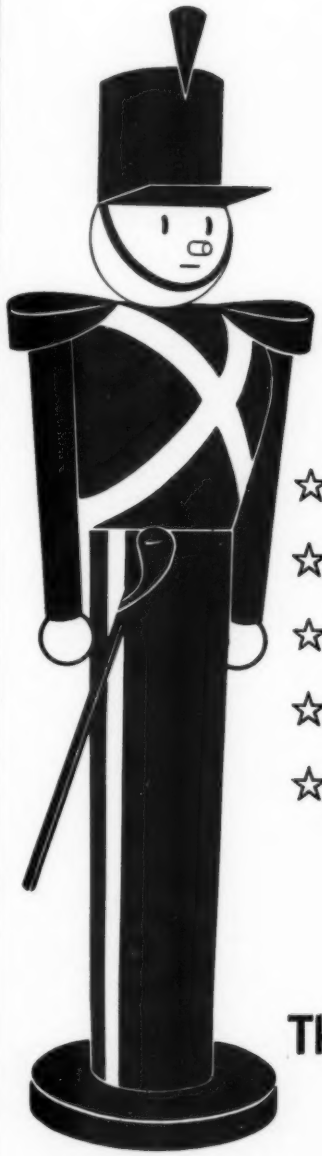

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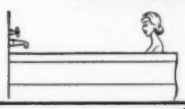

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1. Prentice, H. and Brezak, S.: Jrnl. Amer. Podiatry Assn. 48:191, (May) 1958.
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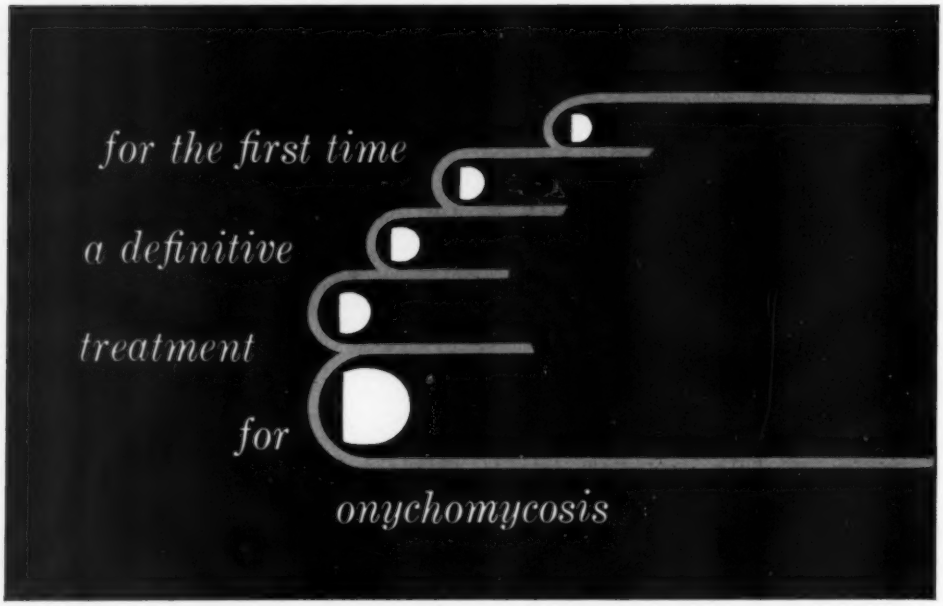

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CORTICOSTEROID INJECTIONS IN THE FOOT*

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A PREVIOUS study[1] by the author on the local use of corticosteroids in the management of numerous foot problems laid the groundwork for further investigation along similar lines.

With the advent of newer formulations and a firmer background of experience, some revealing observations have been noted. This paper will be based on these findings and the reader is requested to refer to the original study[1] in order to obtain a better understanding of the clinical problems herewith presented.

A recapitulation of the earlier paper reveals that in the articular and peri-articular disorders, the following summary and conclusions were noted: "Capsulitis, periarthritis, luxations, bursitis, and degenerative joint disturbances appear to be etiological factors in many foot disorders heretofore considered largely from the viewpoint of purely patho-mechanical origin. Further, it was postulated that the joint disturbances somewhat analogous to Heberden's nodes may result from the trauma, both clinical and subclinical, to which the foot is constantly subjected."[1]

Table 1 summarizes the results of intra-articular injections.

TABLE 1

Intra-articular Injection of Hydrocortisone and Prednisolone Acetate

No. of Cases	No. of Injections	Results				
		0+	1+	2+	3+	4+
194	326 (Av. 1.68)	5	24	15	34	116

0+ 5 patients had no relief (relief, if any, no greater than with previous measures).
1+ 24 had partial relief (fair) or of short duration. Slight decrease in swelling and pain.
2+ 15 patients had good relief of pain and longer remission. Definite reduction in swelling and pain and improved function.
3+ 34 patients had major improvement in which relief of symptoms is complete with greatly reduced swelling and tenderness.
4+ 116 patients had complete remission. No recurrence of pain, limitation of function, tenderness or swelling of the part.

The following summarizes the results in intra-articular injections: 194 patients received intra-articular hydrocortisone and prednisolone acetate injections. A total of 326 injections were given into various joints of the foot, the number of injections per patient averaging 1.68.

* An Award Paper in the William J. Stickel Annual Awards for Research in Chiropody, 1958. Presented at the Annual Meeting of the American Podiatry Association in Washington, D. C., August 1958. Supported in part by grant-in-aid from Merck, Sharp & Dohme Research Laboratories.

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This demonstrated the efficacy of corticosteroid local injection therapy in the arthritides and allied disorders of the foot employing hydrocortisone acetate and prednisolone acetate by intra-articular injection.

The results of our present study, based on more extensive experience with intra-articular corticosteroid injections, is summarized in Table II. The steroid employed in this series was prednisolone tertiary butylacetate,‡ a relatively insoluble form of prednisolone. The local anesthetic was hexylcaine hydrochloride 1%.‡ The technic was similar to that described in the earlier paper.[1]

In periarticular injections, a combination of prednisolone 21-phosphate‡ and prednisolone tertiary butylacetate was used in many cases. Thus, the immediate action of the former, a water soluble steroid, and the extended action of the latter, a much less soluble suspension, were combined to produce an uninterrupted prompt and extended benefit.

TABLE II

Intra- and Periarticular Injections of Prednisolone Tertiary Butylacetate

No. of Cases	No. of Injections	Results				
		0+	1+	2+	3+	4+
258	315 (Av. 1.22)	3	15	41	62	137

It is important to note that supportive measures outlined elsewhere in this paper are essential to good prognosis so that wherever possible, all mechanical and traumatic factors contributing to the disability are eliminated.

A preliminary report on steroid injection of helomata was also rendered previously.[1]

Treatment of the so-called simple corn, both of the heloma durum and heloma molle type, by local corticosteroid injection, has proven successful when complications requiring surgical intervention were absent. It was also established that much of the discomfort of helomata was caused by underlying adventitious bursal and/or inflammatory capsular changes.[1] (Table III)

The successful management of these conditions by local steroid injection therapy is attributed to the antiphlogistic action on the bursa and joint capsule. In addition to corticosteroid injection therapy, whereever indicated, standard podiatric procedures were followed as supportive therapy. It is important to note that all but one patient in the 0+ group had bony proliferations or deformity underlying the corns. In the 1+ response, all except three patients were similarly affected.

TABLE III

Heloma Durum and Molle

No. of Cases	No. of Injections	Results				
		0+	1+	2+	3+	4+
51	74 (Av. 1.45)	10	11	9	13	16

Although the exact action of corticosteroids at the local tissue level has not been definitely established, varied conjectures have been submitted by many investigators. In a study of the effects on the capillary bed Zweifach, et al,[2] reported that following an adrenalectomy in rats, there was a loss of muscle tone in the arterioles, metarterioles and precapillary sphincters which later disclosed a tendency to fragility. The administration of cortisone revealed a tendency toward restoration of normal vascular tone.

Cortisone influences catabolism of protein, suppresses fibroplastic proliferation and appears to loosen the cohesion of collagen bundles and fibres, according to Taubenhaus.[3] It also has the ability to decrease synovial membrane permeability.

Dorfman[4] was unable to determine

‡ These were supplied as Hydeltra TBA, Cyclaine 1%, Hydeltrasol Sterile Solution, respectively, by Merck, Sharp & Dohme Research Labs.

whether connective tissue or vascular effects were primary in his studies of "such phenomena as the inflammatory reaction." He further reports that, "A consideration of the nature of connective tissue indicates that the state of connective tissue may be markedly influenced by material entering it either from the capillaries or parenchymal cells. The connective tissue barrier may in turn, however, play a role in regulating the flow of materials between the blood and parenchymal cells and the composition of the intracellular fluid."

In a discussion on neurofibrous heloma, it was pointed out that patients suffering from these intractable lesions received little or temporary relief regardless of previous measures employed.[1] Steroid injections in these lesions have increased the duration of remissions perceptibly in most instances. A few failures have been reported. A more recent follow-up on some of the patients in the preliminary paper[1] has disclosed a higher percentage of 4+ results in neurofibrous lesions than were tabulated in that report. Conversely, two patients did not respond as well as early treatment first appeared to indicate.

Since publication of the original study, the following observations and/or complications have been noted: 1. Deposition of crystalline corticosteroids over bony prominences in areas subject to friction and/or weight bearing has occasionally produced undesirable effects. This has also been confirmed through communication to the author by other practitioners: Zislin,[5] Wittenberg,[6] Ross,[7] Schroers.[8]

Among these complications have been: (a) Ulceration at site of injection, (b) Implantation cysts, (c) Intractable pain at site of injection not accompanied by the above, but due to foreign body reaction (to steroid crystals). This has been confirmed when surgical intervention became necessary due to the fact that the underlying bony proliferations were the primary cause of chronicity. Under these circumstances, excision revealed the crystalline deposit.

These observations led the author to anticipate that a completely soluble corticosteroid might overcome some of these problems. Accordingly,, after discussion with one of the authorities[9] in corticosteroid research, a new soluble formulation – prednisolone 21-phosphate – was made available for clinical investigation.

The original supply of material contained 10 mgs. of the hormone per cc. Later, a concentration of 20 mgs. per cc. was obtained. This higher concentration permitted smaller volumes of the injectable to be used, a distinct advantage where density of tissue and/or anatomical limitations are major factors to be considered.

Prednisolone 21-phosphate is a delta-1 derivative of 17-hydroxy corticosterone (hydrocortisone), characterized by anti-inflammatory, anti-allergic and anti-fibroplastic activity.[9] The formula is:

Prednisolone Phosphate Monosodium, Merck	1.0%
Nicotinamide, USP	2.5%
Sodium Bisulfite, Reagt.	0.2%
Pheno, Reagt.	0.5%
Sodium Hydroxide, Reagt. q.s. to pH	7.5%
Water for injection	q.s.

Prednisolone 21-phosphate differs from previously prepared steroids in that it is water soluble, being 2,000 times more soluble than prednisolone and/or hydrocortisone.

Technique for injection of prednisolone 21-phosphate is as follows: Materials needed –Instrument tray containing the following materials, 1. Sponges, 2. Germicidal solution,®[1] 3. Sterile sponges, 4. Ethyl Chloride (fine spray), 5. Local anesthetic solution, 6. Prednisolone 21-phosphate, 7. Two syringes– (1 cc. tuberculin type), 8. Two needles – 25 or 26 gauge ⅜" to ¾", 9. Sterile spot or gauze adhesive strips.

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(Note: *Separate syringes and needles are used for anesthesia and the steroids. It is also advisable to use a dry syringe for these steroids to avoid dilution and possible impairment of efficacy.)*

Initial injection of anesthesia is given subcutaneously after ethyl chloride spray and blanching of tissue. This is most important in plantar injections where the anesthetic is injected very slowly, minim by minim at first, to minimize pressure pain. Infiltration speed may be somewhat increased as anesthesia occurs. From ½ to 1 cc. of anesthetic solution is adequate if the technique is proper.

Care must be taken not to inject too deeply into the subcutaneous adipose tissue as anesthesia will be either absent or incomplete. "Ballooning" of the lesion through intra-dermal injection should also be avoided. After gentle massage, through sponge to assure thorough dispersion, the steroid is injected. From 5 to 10 mg. is injected into the lesion and underlying tissue, including adventitious bursa, if present. (The use of tuberculin syringes minimizes pressure inasmuch as considerable resistance to injection may be found in these fibrous areas.) Sterile dressing follows.

Supportive measures should be employed concomitantly or as soon as possible to insure better weight distribution and avoidance of trauma.

In the injection of digital heloma, similar instrumentarium and materials are used as in plantar injections. Here, the anesthesia is infiltrated slowly after ethyl-chloride spray, into the underlying tissues of the corn. The injection is given proximally in a distal direction. (Fig. 1)

After massage, through sponge, to assure complete dispersion, the underlying bursa, if present, and periarticular soft tissues beneath the heloma are injected with 4 to 8 mgs. of prednisolone 21-phosphate and followed by sterile adhesive gauze spot or strip dressing. Shielding or traction padding may be used if indicated.

Fig. 1. Needle position for injecting heloma durum. Upper needle anesthetic, lower needle corti-costeroid.

Reinjections, if necessary, may follow in a week or two. This may be determined on a symptomatic basis. Corns requiring frequent or many injections should be re-evaluated, inasmuch as other factors previously presented in this paper may be present and further steroid therapy would not be indicated.

Longer experience with the methods originally described has led the author to further observations herein reported.

The successful employment of corticosteroid injection in the treatment of heloma, either of the digital or plantar type, hinges on the intelligent selection and evaluation of cases. The soft and osseous tissues underlying the lesion to be injected must be first evaluated. Where bony proliferation or deformity are present, steroid injection will afford only passing, if any, relief and surgical correction is indicated whenever possible. Chronic soft tissue changes in which the normal tissues undergo a hyperplastic fibroplasia[10] of massive proportions or long duration have sometimes proven resistant to this therapy. Concomitant supportive measures, reviewed elsewhere in this paper, are of paramount importance in the management of these neurofibrous lesions. Our experience has shown that

TABLE IV
Results of Present Study

Condition	No. of Cases	No. of Injections	Results 0+	1+	2+	3+	4+
Heloma neurofibrosum	46	76 (Av. 1.6)	8	4	9	13	12
Heloma durum	177	203 (Av. 1.15)	18	17	29	54	59
Heloma molle	38	46 (Av. 1.19)	7	2	5	8	16

the most dramatic relief was obtained in acute or sub-acute involvements. Although the more chronic cases also showed a good percentage of success, the results were somewhat modified by the very chronicity of the disorders. These required a greater number of injections, longer treatment periods and meticulous attention to all necessary supportive therapy. In the treatment of plantar neurofibrous heloma, time, patience and attention to mechanical factors both on the part of the patient and the doctor are prerequisites to effect a regeneration of more normal plantar tissues.

Fig. 2. Tailors bunion. Before (upper) and after (lower) therapy – 3 injections of 8 mg. prednisolone 21-phosphate. Heloma durum 2 injections of 4 mg. supportive therapy—moulded shoes (shoes above not adequate). Female, age 60.

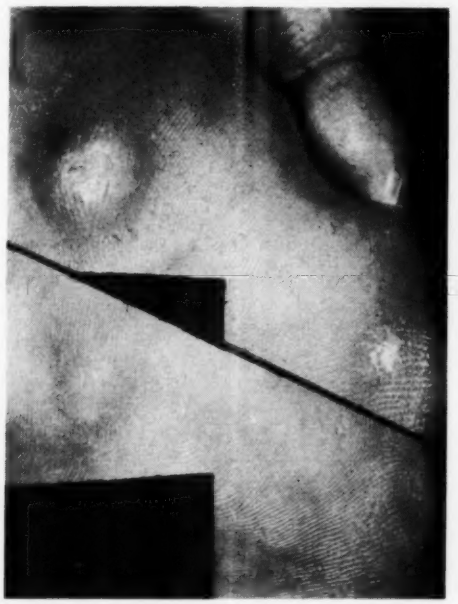

Fig. 3. Neurofibrous helomata. Before (upper) and after (lower). II head—one injection 4 mg. prednisolone 21-phosphate, 2 of 6 mg. V head—one injection of 6 mg. Supportive therapy—dynamic foot mold, forefoot balanced. Male, age 34.

Table IV summarizes the results obtained with injection of Prednisolone 21-phosphate as described above. In addition to corticosteroid injection therapy, standard podiatric procedures were followed as supportive therapy when indicated.

TABLE V

Results by Other Investigators*

Condition	No. of Cases	Results			
		Poor	Fair	Good	Excellent
Bursitis (calcaneal)	2				2
(T. Achilles)	3				3
(Intermetatarsal)	6	1		1	4
(1st M.P.)	5			1	4
(5th M.P.)	9		1		8
Osteoarthritis (Forefoot)	4	1			3
(Rearfoot)	4				4
Calcaneal Spur	2				2
Fascitis (heel)	2				2
Neurofibroma (plantar)	18	2	2	9	5
Heloma Durum	18	3	3	5	7
Heloma Molle	6	1		2	3
Ankle Sprain	2				2
Periostitis	1				1
Tendonitis	5			1	4
Arthritis (Degenerative)	1				1
Gout	2				2
Total	90	8	6	19	57

*Zulli, Schroers, Goldsmith, Ohio College of Chiropody.

Failures in treatment are usually due to one or a combination of the following factors: 1. Improper selection of cases, 2. Poor patient control, 3. Definite surgical entities such as osseous hypertrophy and/or deformity, 4. Other factors such as (a) Poor footgear, (b) Obesity, (c) Inadequate supportive measures, (d) Other trauma. Another point is that faulty technique may ameliorate the results either through improper placement of the injected hormone, or tissue trauma which may be as painful or more so than the original disorder.

The following supportive measures have proven of value in corticosteroid local injection: 1. Traction pads of the Polokoff (or similar) type, 2. Shoe corrections such as Denver, Nutt and Lewin bars, 3. Shoe therapy through balance padding, 4. Dynamic moulds or static moulds of the Levy type, 5. Balance inlays and supports, 6. Billig mobilization techniques,[11] 7. Locke-Frost heel cord stretching,[12] 8. Caplan casts (for painful heels).

Oral and parenteral medication was employed wherever indicated but are not discussed in this paper.

All patients in this study were contacted at the time of this writing and either questioned or re-examined.

In order to check the results reported by the author in this study, a group of twenty investigators in various areas were supplied with prednisolone T.B.A. and prednisolone 21-phosphate to carry on a similar clinical investigation.

The technics employed by these investigators were those suggested in the earlier paper[1] utilizing these newer corticosteroid formulations.

Results reported to the author by Zulli,[13] Schroers,[8] Goldsmith,[14] Cleveland Foot Clinics of the Ohio College of Chiropody,[15] are summarized in Table V. In

essence, the results of these investigations verify the findings reported by the author.

Summary

1. A review of an earlier paper on the place of local corticosteroid injection therapy in the foot has been presented.

2. Later findings based on greater experience with newer and improved steroid formulations are reported.

3. The use of a new water soluble corticosteroid, prednisolone 21-phosphate, has been investigated and described.

4. The results of these therapies are reported.

A review of local corticosteroid injection therapy establishes this method of treatment to be of great value in the management of various foot disorders. Patients' acceptance of this therapy in the vast majority of cases has been excellent and sometimes even enthusiastic. A relatively small number of patients are uncooperative.

The newest water soluble corticosteroids have proven of special value in soft tissue injection. While these highly soluble steroids dissipate more quickly, their passing action is usually adequate in accomplishing the desired effect without possible complications due to crystalline deposition.

The author acknowledges with thanks the valuable assistance of Sidney Zislin, D.S.C., Palmyra, New Jersey.

134 Engle Street

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THE STRENGTHENING OF CHRONICALLY STRAINED ANKLE LIGAMENTS WITH INJECTIONS OF SODIUM PSYLLIATE*

GORDON J. BRONSTON, B.A., D.S.C.†
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CHRONIC strain and laxity in the ligamentous structure of the ankle underlie many of the orthopedic problems related to this articulation. This paper presents a new method of approach for the treatment of these conditions. Though this research has been concerned primarily with the ankle, the basic principle of strengthening and shortening weak and lax ligaments can theoretically be applied to any chiropodical problem wherein these structures are involved.

History

In 1935 Rice[1] succeeded in treating abdominal hernias through the injection of various chemical agents into the affected areas. He was able to produce enough

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white fibrous elastic tissue in the weakened abdominal wall to correct these conditions. Many of these agents, however, caused serious side effects, and in his search for a more suitable drug, he tried Sodium Psylliate.®[1]

Soon after publication of his paper, others began using sodium psylliate for various orthopedic problems. The first of these was G. S. Hackett[2] who has been chiefly concerned with chronic ligamentous problems of the back. He found that through injecting the spinal and sacral ligaments it was possible to alleviate the back problems related to these structures in 90% of his patients. His laboratory research[3] with rabbits demonstrated an actual increase in the number of collagen fibers comprising the ligaments. In tests on the "tendo Achillis" of these animals, he was able to increase the tensile strength of this structure by 100%. Moreover, histological sections showed the new fibers to be microscopically indistinguishable from the old.

The second of these men was L. W. Schultz[4,5] whose application of this drug has been confined to the temporomandibular articulation. He was able to correct chronic luxations and subluxations of this joint with intra-articular injections of sodium psylliate. Through animal experiments he also proved that the involved ligaments became thickened, and consequently stronger. Through clinical measurements, he was able to demonstrate an actual shortening of these structures.

Thus, from these men have evolved the two techniques used in this work, that is—the intra-ligamentous and intra-articular methods of applying sodium psylliate therapy.

Physiology and Pharmacology

Chemically, sodium psylliate[6] is a mixture of the sodium salts of five fatty acids: oleic, lenoleic, linolenic, palmitic, and stearic, placing it in the same chemical category as the soaps. The final product is a mixture of a 5% solution of sodium psylliate and 2% benzyl alcohol.

When this product is injected into a ligament it acts as an irritant to the fibroblasts of the ligament starting an inflammatory reaction. Within five days new fibroblasts can be seen in the tissue. After two weeks new bundles of dense fibers appear. By the eighteenth day most of the fibrous tissue appears mature, although it takes approximately six weeks until this process is completed.

A factor to be considered in the formation of these new fibers is their tendency to contract as they mature. This process is common to all fibrous tissue, and perhaps we are most familiar with it in scar formation of the skin. However, this contracting or shortening will take place only if the stress upon the particular ligament is temporarily relieved.

Further experimentation into the physiology of this drug was carried out to ascertain its effects on non-ligamentous tissue. The results of these tests showed: that intra-articular injections had no destructive effects upon the synovial membrane or upon the articular cartilage; that 30 cc. to 60 cc. injected directly into the left ventricle of the heart produced no immediate or autopsy changes; that injected motor nerves in the mandible showed no adverse affects; and that subcutaneous injections of 5 cc. to 20 cc. produced no discomfort or after slough.

Intravenous injections, however, will produce a sclerosing or fibrous obliteration of a vein. This technique[7] requires that one to 1.5 cc. of sodium psylliate be injected into a blood free segment of a vein and held in this area for one to two minutes. Thus, the accidental sclerosing of a vein during the chiropodical use of this drug is practically impossible since none of the conditions necessary for applying this tech-

[1] G. D. Searle & Co. Trade Name Sylnasol.

nique are approached in ligamentous therapy.

Conditions for Treatment

The first consideration in the application of this therapy is the recognition of pathologies that will respond to this injection technique. Since any weak or lax ligament can be strengthened and/or shortened, theoretically any ligamentous problem involving a chronic sprain or joint instability due to a lax or elongated ligament could be corrected.

With regards to the ankle, the most common of these problems is the lateral ankle sprain with the resultant lateral instability. The patient who is constantly turning over on the affected ankle, especially while running or engaged in some sport, or the person who complains of pain and edema in the lateral ankle area are common examples of this type of involvement.

An often overlooked sprain involves the distal tibio-fibular syndesmosis with laxity in the anterior inferior tibio-fibular ligament causing a mild diastasis. Here the pain may be felt deep within the joint and can easily be confused with some form of arthritis. However, a detailed history of the condition, comparative x-ray studies, and a tenderness on palpation of the involved ligament will usually confirm the diagnosis. Medial sprains rarely become chronic and are therefore infrequent problems for this type of therapy.

This treatment is contra-indicated in any acute joint involvement whether it is from trauma, arthritis, or infection.

Materials and Dosage

The second consideration includes the materials and dosages used for the injections. Sodium psylliate is mixed with a local anesthetic in a 2 cc. Luer Lock syringe with a 23 to a 24 gauge, 1½ inch needle.

The local anesthetic minimizes the discomfort at the time of the injection and greatly reduces the post-injection pain that can become quite severe when the sodium psylliate is not sufficiently diluted.

Hackett,[8] in searching for a suitable anesthetic, found that Pontocaine Hydrochloride®[2] in the .15% strength was the most compatible of the available anesthetic agents. Other anesthetics in stronger concentrations will produce a milky white precipitate upon mixing them with the sodium psylliate.

It is advisable not to use an extremely fine gauge needle because one important guide to accurate injections is the resistance offered the needle by the fibers. Too fine a needle could pass between these fibers and go completely through the ligament without an awareness of this, thereby losing the effectiveness of that injection.

Because of the angle of approach to certain ligaments, and because of the edema that is often present with these conditions, needles of sufficient length are necessary to insure adequate penetration.

Initially injections were given using a mixture of one part sodium psylliate and three parts anesthetic. Later this ratio was increased in equal parts of each drug. This change was done to effect a more rapid production of collagen fibers within the ligament.

The total amount of the injected mixture per ligament has varied from .3 cc. to .5 cc. This variance depends to some extent upon the over-all size of the patient's foot and leg, but more particularly upon the specific ligament involved. All intra-articular injections into the ankle mortise have been .5 cc.

The first treatment usually consists of only one injection in order to observe the patient's reactions, if any. Following this, any number of injections can be given although the maximum number necessary per visit usually does not exceed four. The length of time between treatments will vary

®[2] Winthrop-Stearns Inc.

from five to ten days. Weekly injections are usually sufficient, however.

The over-all period of treatment lasts approximately six weeks. Although the average number of injections per ligament is three or four, supportive therapy should be continued for at least a six-week period to insure a good result. This is important because the new fibers are easily stretched before complete maturation has taken place, which could result in little or no increase in joint stability if these stresses were allowed to operate during this period.

Completion of treatment usually depends upon a subjective feeling of strength in the part, the absence of pain on palpation, and on active movements of the ankle.

Accuracy of Injection

The final consideration is the accurate introduction of the drugs into the affected ligament. This can be a very difficult problem, especially in an edematous ankle. There are, however, certain considerations that help overcome this problem:

1. A thorough knowledge of the anatomy in the area.
2. Marking the point of maximum tenderness on the skin and directing the needle into this area. This point is usually at the osseous attachments of the ligament.
3. The needle will meet with resistance as it enters the ligament and it will require a good, firm pressure on the syringe to introduce the fluid.
4. Oftentimes the patient will complain of a stinging or throbbing sensation immediately after the injection which can last for several minutes. This generally, but not always, indicates that the injection has been correctly given. This occurs because of the distention of the ligamentous fibers by the fluid.

Figure 1 demonstrates the method of approach to the three commonly involved ankle ligaments. The approach to the calcaneal fibular ligament passes beneath the tip of the lateral malleolus in order to avoid a possible injection into the peronei tendons which cover a large portion of this ligament. The capsular ligament (not shown in this drawing) is approached through a regular intra-articular injection.

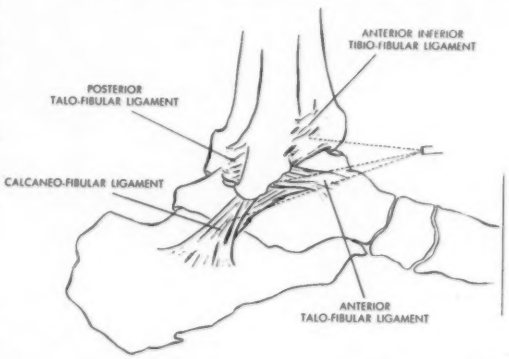

Fig. 1. Direction of approach to lateral ankle ligaments.

Results

To date 24 patients with ankle conditions have been treated. These patients have had their conditions for an average of four years with a range of five months to ten years duration. Only cases of a chronic nature where other therapies had been tried were included in this series. Of the completed cases, 13 now have normal function with no pain or tenderness on palpation. Five patients obtained only partial improvement, while another was completely unresponsive to treatment. Of the remaining patients, one had to be discontinued due to the severity of the inflammatory reaction, two failed to complete their course of injections, and three are still under treatment but with definite signs of improvement.

Four of the above 13 patients were treated only with injection therapy using no supportive measures. This was done

purposely to determine the pure effect of the drug. In subsequent cases, however, supportive measures were used along with the injections.

Reactions

The drug, as mentioned earlier, initiates an inflammatory reaction. Thus some symptoms of inflammation usually, but not always, result from an injection, the most common of these being pain; generally, this is mild and well tolerated by the patient. When pain does occur, it appears within the first 24 hours after the injection. This can usually be controlled with aspirin. However, APC with demerol is frequently prescribed as a precautionary measure.

Occasionally a severe inflammatory reaction typical of a cellulitis with redness and heat in the area will occur. These are rare and the one case that was encountered was in a woman who stated that she had had similar reactions with previous injections for other conditions.

Allergic manifestations are also very rare. In one series of 25,000 injections into 2000 patients for the treatment of varicose veins, there were only five allergic reactions, four of which were of a local nature, while the fifth produced an anaphylactic shock. Hackett[8] reports no unfavorable incidents or sequelae from more than 4000 intra-ligamentous injections. And in my series of 150 injections there have been no allergic reactions to the sodium psylliate, although there was one mild local reaction to the pontocaine hydrochloride. These and other papers concerning the sensitivity of persons to sodium psylliate all report an extremely low incident of allergic reactions, far less than for the antibiotics and many other medications.

Analysis of Failures

In analyzing the reasons for certain failures or apparent failures in my series, two complicating problems were encountered which should be mentioned.

One of the criteria used in judging the relative extent of the pathology in a ligament is the absence of tenderness upon palpation in the area of the involved structure. In some cases of chronic sprain that have extended over a period of several years or more, osteoarthritic changes will have taken place which may irritate an otherwise strong or strengthened ligament. This irritation can be mistaken for continued weakness in this tissue and additional injections will be given without complete alleviation of the symptoms. Therefore, in treating long-standing sprains, consideration should be given to the possibility of arthritic changes producing some of the symptoms relative to these conditions.

The second problem causing a true failure is due to an accompanying involvement of the cuboid with or without tenderness in the calcaneal-cuboid articulation. This involvement seems to increase the stress upon the lateral ankle ligaments, especially the anterior talo-fibular, and oftentimes does not allow full recovery of these structures. Thus some form of cuboid support has to be used in these cases in order to obtain satisfactory results in the ankle. Other orthopedic problems can also decrease the effectiveness of this therapy if they are not cared for during the treatment period.

Conclusion

The favorable results obtained in this series of patients coupled with the extensive laboratory and clinical material pertaining to the use of this drug for similar conditions in other parts of the body indicate that sodium psylliate can be a valuable modality in treating chronic ankle sprains, and possibly other ligamentous problems of the foot and ankle.

Further work with this drug, including long range follow-up studies, will be necessary to conclusively demonstrate both the full effectiveness and any shortcomings of

this therapy. However, the clinical results observed over the past 14 months tend to indicate a new and effective method of treatment for chiropodical problems of a chronic ligamentous nature.

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REACTIONS TO INJECTED DRUGS AND THEIR EMERGENCY CARE*

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We are routinely using injectables in our practice that were definitely not routine a few short years ago. The patient is deriving the benefit of this newer knowledge and we are able to speed the recovery of various conditions that find their way into our offices.

The introduction of a drug is for its local effect or for its effect on a local problem via the general system. It is common practice in modern podiatry to use drugs for local anesthesia and local anesthetics for their therapeutic effects in various inflammatory conditions; hormonal substances that are effective in controlling arthritic symptoms when introduced directly into joints; sclerosing agents for the obliteration of small neoplasms, or small varicose veins; vitamin preparations in an attempt to eradicate hyperkeratoses and verrucae.

We also have a moderately long list of drugs which are used for their effect on local conditions, but via parenteral injection. Such agents are antibiotics, antiarthritic drugs, drugs used in peripheral vascular disease, sedation and hypnosis, allergy, vitamins; all these substances are capable of doing harm despite their usually beneficial effect.

It is not the purpose of this paper to discourage the use of these agents, but rather to point out some of the side effects or undesirable effects of these drugs.

The undesirable effects of these drugs may take many different patterns. However, we can break this down into dermatologic and systemic patterns. The skin eruptions may take many different courses. They may produce an allergic eczematous dermatitis, urticaria, exfoliative dermatitis, bullous eruptions, may take the pattern of erythema multiform-like eruptions, or fixed eruptions. The systemic patterns that may be caused by these drugs are less numerous than the skin problems, but of course, they are also more serious. The serum sickness pattern, blood dyscrasias,

*Presented at Mid-West Chiropody Conference, March 1958, Chicago, Illinois.

and shock account for most of the systemic problems. It is a rather sobering thought to think that although we are using a drug via the injection route to alleviate a pedic problem we could possibly be inducing a problem as serious as aplastic anemia or a fatal form of shock, but these things can and do happen. That doesn't mean that we should throw all injection therapy out the window, but it does mean we should be aware of these problems and know how to cope with the emergency when it arises.

Serum Sickness Pattern

The term serum sickness pattern is applied to drug hypersensitivity, and is derived from the fact that a considerable number of drugs otherwise apparently unrelated, may produce the clinical picture of serum disease. As in serum sickness, symptoms occur between the fourth and thirteenth day, usually between the sixth and tenth day after the first dose of the drug. However, it is possible, due to previous sensitization, that the symptoms come on within a matter of minutes or hours.

The symptoms consist of fever, urticaria, arthralgia, and lymphadenopathy, and this is sometimes complicated with a peripheral neuritis. By far the most frightening complication of an undesirable reaction to a drug induced by injection, is shock. This is alarming and occasionally fatal and is usually given the term anaphylactic shock, although certain forms of shock do not fit into the pattern of anaphylaxis. After a brief interval following the injection, symptoms of restlessness, respiratory difficulty, convulsions, and death may occur within a matter of minutes. The patient may have a feeling of uneasiness, a sensation of warmth or flushing, or possibly one of lightheadedness, a feeling of thoracic oppression, and difficulty in breathing which may be associated with cyanosis.

Penicillin

The injection of penicillin has brought about its status as perhaps the number one offender in hypersensitivity of the drugs being used today. The undesirable effects of penicillin may show as a variety of skin lesions, as a serum sickness pattern, and by of course, anaphylactic shock.

For the past few years in our offices we have, we hope, minimized the chances of undesirable effects in using penicillin for such conditions as cellulitus, by the addition of an anti-histamine in the vial of penicillin. The antihistamine we have used has been Chlor-Trimeton. Into a 10 cc. vial of penicillin we have introduced 1 cc. of Chlor-Trimeton; which is a hundred mg. to the cc. Therefore at each injection, which is practically always 1 cc. of the penicillin or 300,000 units, the patient automatically received 10 mg. of Chlor-Trimeton; which we feel has cut down the chances of any untoward reactions.

Of course, the greatest precaution to undesirable effects is careful questioning of the patient as to previous experiences with this drug or for that matter previous bad experiences with any drug. Patients who are asthmatic or show general allergic problems do not receive penicillin. Fortunately, there are many other antibiotics which can be given orally, which materially reduce the chances of a severe reaction. In fact, in most cases it is probably better to give penicillin orally—the effects are almost the same, but the hazards are much less.

There is now on the market an enzyme Neutrapen®[1] which specifically neutralizes penicillin. The literature states and clinical studies have shown its value in reducing the severity and the duration of both moderate and acute reactions to penicillin. This product comes in a vial with a single dose

®[1] Schenley

of 800,000 units of this enzyme; (Penicillinase®2) in dry powder form. Just before its use, 2 ccs. of sterile water for injection must be added. This product probably has its greatest benefit in the serum sickness like pattern, in skin problems, and is of questionable value in the use of the rapid acute anaphylactic reactions; which may cause the patient to expire within minutes; it would not have enough time to be effective. In the less severe complications of penicillin injection, one 1M dose is given and may be repeated in two to three days. This product completely neutralizes the therapeutic effects of the penicillin so it should not be used at the same time the penicillin is given. In the dry form, as it comes in a single dose vial, it is very stable, can be kept indefinitely until reconstituted. After that it must be refrigerated and will retain its potency for one week.

ACTH and Cortisone

Two very valuable tools in the treatment of untoward reactions to drugs are ACTH and Cortisone. In fact, in many cases they have been given credit for saving an individual's life. But the pattern holds, these drugs are also capable of causing adverse or undesirable effects from their usage. I am not referring to the toxic effects and the general systemic effects of these drugs which may occur after prolonged use, but these drugs are capable of causing systemic reactions such as anaphylactic shock. The serum sickness pattern has also been attributed to these drugs and also cases of aplastic anemia have been reported.

Vitamins

If there was one class of substance, which is routinely injected and routinely used, that one would think would probably never cause undesirable reactions, it would be vitamins. But a great number of cases have been reported of Thiamin or Vitamin B1. This vitamin has caused skin manifestations, mostly urticaria, and has also caused systemic manifestations. Asthma has been reported and the serious manifestation—shock. There have been several deaths reported due to shock from Vitamin B1. These usually followed prolonged courses of the drug. However, there was a case in which only five injections were given and shock occurred.

Searching the literature, I found that there have been several cases reported of hypersensitivity to B12 which were severe reactions. (By severe I mean going into shock.) I have a letter from a Podiatrist practicing in New Jersey. I think it will describe what I mean. "My wife had been receiving Vitamin B12 intramuscularly every two to three weeks for approximately a year and a half. I gave her an injection as per usual procedure. Within about two minutes she started complaining of an itching on her palms and soles. It then progressed to all her mucous membrane tissues and her breathing became very difficult. I called for the ambulance, physician, and police for emergency oxygen. When we found that oxygen was insufficient, the physician ordered that the ambulance take her to the hospital. In addition to the above symptoms, wheals broke out on the skin, and after awhile itching persisted throughout the body. At the hospital the physician gave her an injection of ACTH and something else; which I am unable to remember. This occurred last October. The physician then discharged her from the hospital, to be taken home in the ambulance. On the return trip, she developed stomach upset and vomited. The following day she rested and returned to normal activity. I don't remember which; but two or three weeks later, she had a slight reaction again; which an allergist said was probably a serum reaction from the B12 which was delayed. Of course, she no longer received B12." This reaction is a typical anaphylactic reaction.

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There was a Postscript which said, "At the time of her next to last injection, we remembered that my wife complained of itching at the site of injection."

An innocuous drug such as B12 almost cost the life of a colleague's wife. Prompt medical attention made this an incident which will just be remembered, but it could have been remembered much more seriously.

A drug which the podiatry profession helped develop and is using very frequently these days is Vitamin A for local intradermal and subcutaneous use. In corresponding with Dr. Raymond Locke, N. J., he informed me he has seen six anaphylactic type reactions from Vitamin A solutions and knows of three or four others that happened to men in his immediate area. Dr. William Cope, Royal Oak, Michigan, informed me he had an urticarial reaction which was thought to be due to a Vitamin A solution and that he has heard of a few other cases in his area. These cases are described as quite alarming. The patient develops dyspnea. The face becomes very flushed and the patient very apprehensive.

I have seen poor reactions to this drug in my practice. These have been skin manifestation type reactions. All have occurred after the second injection, twenty-four to forty-eight hours later. The patients broke out either with urticarial wheals or erythematous macules and papules. These reactions were handled by prescribing oral antihistamines. Of course, the treatment method was changed and these patients received no additional injections of Vitamin A.

Insoluble Corticosteroids

I have had several, up to a dozen cases of foreign body type reactions after injection of these agents. By agents, I mean both hydrocortisone and prednisolone. I have talked to other men throughout the country and it seems as if this is not infrequently found. The area, for example, under an heloma durum on the dorsum of the toe, becomes indurated, erythematous and edematus. Some of them have broken down into ulcers. They are very stubborn lesions to handle. Of course, we can get rid of the problem by excising the area and doing a joint resection. However, the best method, other than surgery, I have found to cope with this undesirable local reaction is to inject the area with Wydase® and a local anesthetic. The spreading effect of the Wydase in the solution seems to diminish the symptoms. One foot surgeon described the insoluble steroids as plaster of paris sticking to the capsule when resecting the area.

Local Anesthetics

By far the greatest number of injections given in podiatry offices are local anesthetics, either for their effect as anesthetic agents or for therapy. These solutions are used routinely and are among the most capable of causing severe reactions. The patient may die in two minutes from an injection of a local anesthetic. To me, it is remarkable that more patients do not expire, since I am afraid it is the exception to have the necessary agents present to combat the reaction to this drug. Some of the authorities claim that you will practically never get a reaction to a local anesthetic agent, since 99% of the reactions are due to the introduction of the agent intravenously or the very rapid absorption of large amounts of the drug. In our field, we do not use, as a rule, very large amounts of local anesthetics, but there are many occasions when we are trying to give a block, when we are in close proximity to large blood vessels. Regardless of the theory, the fact remains that patients have died and patients are having severe reactions to these drugs and we use them perhaps more extensively than any branch of medicine with the exception of dentistry.

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of 800,000 units of this enzyme; (Penicillinase®[2]) in dry powder form. Just before its use, 2 ccs. of sterile water for injection must be added. This product probably has its greatest benefit in the serum sickness like pattern, in skin problems, and is of questionable value in the use of the rapid acute anaphylactic reactions; which may cause the patient to expire within minutes; it would not have enough time to be effective. In the less severe complications of penicillin injection, one 1M dose is given and may be repeated in two to three days. This product completely neutralizes the therapeutic effects of the penicillin so it should not be used at the same time the penicillin is given. In the dry form, as it comes in a single dose vial, it is very stable, can be kept indefinitely until reconstituted. After that it must be refrigerated and will retain its potency for one week.

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I have had several, up to a dozen cases of foreign body type reactions after injection of these agents. By agents, I mean both hydrocortisone and prednisolone. I have talked to other men throughout the country and it seems as if this is not infrequently found. The area, for example, under an heloma durum on the dorsum of the toe, becomes indurated, erythematous and edematus. Some of them have broken down into ulcers. They are very stubborn lesions to handle. Of course, we can get rid of the problem by excising the area and doing a joint resection. However, the best method, other than surgery, I have found to cope with this undesirable local reaction is to inject the area with Wydase® and a local anesthetic. The spreading effect of the Wydase in the solution seems to diminish the symptoms. One foot surgeon described the insoluble steroids as plaster of paris sticking to the capsule when resecting the area.

Local Anesthetics

By far the greatest number of injections given in podiatry offices are local anesthetics, either for their effect as anesthetic agents or for therapy. These solutions are used routinely and are among the most capable of causing severe reactions. The patient may die in two minutes from an injection of a local anesthetic. To me, it is remarkable that more patients do not expire, since I am afraid it is the exception to have the necessary agents present to combat the reaction to this drug. Some of the authorities claim that you will practically never get a reaction to a local anesthetic agent, since 99% of the reactions are due to the introduction of the agent intravenously or the very rapid absorption of large amounts of the drug. In our field, we do not use, as a rule, very large amounts of local anesthetics, but there are many occasions when we are trying to give a block, when we are in close proximity to large blood vessels. Regardless of the theory, the fact remains that patients have died and patients are having severe reactions to these drugs and we use them perhaps more extensively than any branch of medicine with the exception of dentistry.

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I mentioned the accidental introduction of these agents into a vein. Of course, we know about aspiration, but it is very possible to have the needle within a vessel, aspirate and get no blood, because the beveled edge of the needle is lying against the wall of the blood vessel. This can be avoided and it should be routine that when using a block, such as a posterior tibial block where we are very close to a major vein, that we aspirate when we are at the site of injection, and before injecting, turn the syringe 90 degrees and aspirate again. If we were in the blood vessel and if the beveled edge was against the wall of the blood vessel, the turning of the syringe 90 degrees would permit aspiration of blood. We would not have the accidental introduction of the local anesthetic agent into the blood stream, with the sometime disastrous results.

Most reactions to local anesthetics will take place within five to ten minutes after injection and if it doesn't take place within twenty to thirty minutes, it probably will not happen at all. Symptoms and signs appear with varying degrees of rapidity and severity. The patient becomes somnolent and the somnolence gradually develops into coma. A few patients have enough insight to realize that all is not quite right and in the earliest phases of the reaction describe themselves as being uncomfortable and somewhat apprehensive. A small group of patients may become euphoric and elated.

It is always good practice to maintain contact with the patient during the introduction of local anesthesia. By doing so, you can determine the patient's mental state and detect the beginning signs of a reaction. The patient who has been complaining about the insertion of needles abruptly becomes less fluent and apparently more cooperative. You should not breathe a sigh of relief, but rather should become apprehensive about the state of your patient.

In spite of proper care, and in spite of all measures, the worst can happen, but if we have the materials present, if we have the know-how, and if we have used the proper approach, then we have done all that can be expected of us to do. I am not talking about the legal aspect of this, but I am talking about our moral obligation to the patient. If we are using any agent by injection, we must know how to cope with it.

There are many drugs, agents, which can be used to combat shock. There are many different opinions as to the best manner of treating this type of shock. The method outlined below is the one I use and is a consensus of material gathered from the literature and opinions of some physicians and a few anesthesiologists. I don't feel as if we have to have all of these agents present, but there is a definite minimum that we have to have. Of course, we are going to call for help. We are going to ask a physician to come in and help us, but we must have (as I said before and will say again) the agents present.

Care for Severe Reactions

1. Give Oxygen.
   a. Provide adequate airway.
   b. Supply oxygen by bag and mask.
   c. Artificial respiration by squeezing bag regularly, mask tight on face. *Be sure chest expands when bag is pressed.*
2. Elevate Blood Pressure.

   Give phenylephrine in (.25 mg.) doses intravenously. Repeat in 2-3 minutes if blood pressure has not returned to normal.
3. Stop Convulsions.

   Given seconal intravenously until convulsions stop. (3cc. of ¾ grains per solution is usually enough.) Repeat if convulsions recur.

A potent antihistamine for possible intravenous use should be available. It will help sometimes in procaine or local anesthesia shock, but it is of great value in anaphylactic shock. I prefer Chlor-Trimeton®[4]. Incidentally, if you are really in a hurry, you don't have to bother diluting this solution—the Chlor-Trimeton with water for injection. You can take 1cc into a 5cc syringe, introduce the needle into a vein, aspirate 3 to 5cc's of blood and then reinject the Chlor-Trimeton and blood slowly (one minute).

It is possible when a patient is in circulatory collapse, that it will be impossible to find a vein in which to inject the adrenalin. If such is the case, then we must resort to a "cut down." This is relatively simple since we know the area involved. A transverse incision is made over the ankle where the internal saphenous vein is located. Retract the skin with the hemostat and inject directly into the vein.

The minimal equipment that should be instantly available whenever you are going to use local anesthesia is the following:

1—A tank of oxygen
2—A reducing valve
3—A mask and rebreathing bag
4—A Pharangeal airway
5—A vaso presser drug
6—A soluble barbiturate
7—A rubber tourniquet
8—Sterile scalpel and hemostat for cutdown

Many times in the local anesthetic solution, we will include epinephrin. This agent should not be used in patients with hypertension and coronary disease. The addition of adrenalin delays absorption of the anesthetic solution and is probably of help in preventing reactions to the anesthetic solution. However, it has its drawbacks too. I think sometimes, we use concentrations of adrenalin that are too high in an attempt to control bleeding in the operative field. It is quite possible to have undesirable degrees of ischemia, even to the point of precipitating gangrene. Reactions to adrenalin are typified by tachycardia, palpitation, apprehension, and hypertension. To differentiate between a reaction to the anesthetic solution and the adrenalin is not difficult, since reactions to anesthetic solutions are typified by bradycardia and hypotension, instead of the tachycardia and hypertension, in adrenalin reaction. The treatment of a reaction to adrenalin is symptomatic. Oxygen is used to support the heart through periods of overactivity and a sedative (such as Thiopental and Theoamytal, short acting) may be given to allay the patient's apprehension. These reactions are seldom fatal and usually do not last long.

®[4] Schering

Other Drugs

This is a general method of dealing with hypersensitivity to other drugs which are injected for their effect on a local condition. Most of these injections are given in the upper arm. Even penicillin is best given in this location because of ease of treatment in case of reactions.

If a reaction appears to be coming on, the first thing we can do is to apply a tourniquet, proximal to the site of injection. Then two-tenths of a cc of adrenalin (1:100) is injected into the site of the previous injection and just proximally to this. This will help to slow absorption of the drug. Another 0.2cc may be injected into the opposite unobstructed arm. The patient is placed in a Trendelenberg position and a small amount of oxygen may be given. The tourniquet is momentarily released at the end of four or five minutes and reapplied with subsequent release for longer periods at shorter intervals as improvement occurs. Most of these hypersensitivity symptoms will be held in check with just these means. If, of course, the patient appears to be going into deep

shock, then the adrenalin is used more freely and given intravenously.

Further supportive therapy could include the intravenous use of an antihistamine such as Chlor-Trimeton or the intravenous injection of a hormonal substance such as hydrocortisone or prednisolone. Since most reactions to drugs given by the injection route usually happen within twenty minutes or so, in our office, we have made it a routine practice to have the patient remain in the chair or on the table for twenty minutes or so after the injection is given. Even if a patient is only going to have a mild reaction (and that is not uncommonly found, such as dizziness, lightheadedness, etc.) they are much better off on the chair or table where just the recumbent position, and perhaps a little whiff of oxygen will make them feel better, than letting them walk out on the street. And, of course, there is always the chance this mild reaction may go into something more serious.

Conclusion

A review of the common injectables used in modern podiatry practice reveals that many of the agents used are definitely capable of sensitizing man and pave the way for untoward reactions. As we use these modern agents with increasing frequency we must be fully capable of dealing with these untoward reactions. It is the author's opinion that too often in the past we have not been made aware of these undesirable reactions and that it is the duty of every practitioner to report these undesirable reactions as well as the beneficial results.

1477 Harper St.

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RATIONALE OF CORTICO-STEROIDS AND THEIR DERIVATIVES*

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THE history of therapeutic intra-articular and soft tissue injection in non-specific diseases in the pre-cortisone era is sporadic and disappointing. To mention but a few attempts, liquid petroleum, procaine hydrochloride, lactic acid and acid sodium phosphate have had their vogues; however no one of them is in general use and there is little or no objective evidence that they act as anti-inflammatory agents.

Hollander, in his work with hydrocortisone, claimed that partial suppression of inflammation occurred in ninety per cent of cases within 24 hours of the injection, the duration of benefit averaged approximately eight days with a wide and unpredictable range of 48 hours to several weeks. There were no systemic effects following these injections and subsequent injections appeared to give rise to the original one. When the injection ceased, the joint usually

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returned to its original state, and in no case was the joint made worse by the injection.

Since in the majority of cases the improvement is only of short duration it could be argued that there is no justification for using cortico-steroids or any of their derivatives as routine therapy. The injections are at times unpleasant, occasionally painful, time-consuming, and since the risk of infection is present, other problems have to be considered, however slight they may be in practice.

Despite all of these logical objections the current vogue for this form of therapy was skyrocketed since the cortisone derivatives first came into use. One reason is that the improvement after each injection is more prolonged than previously stated, possibly from three to six months. Occasionally a single injection may be sufficient to provoke permanent remission in an inflamed joint, Heloma Durum, or soft tissue.

At this time there is no way of predicting which cases will behave in this manner or why they will do so. When one obtains a result as fast as possible it is very impressive and it seems that optimism rather than logic lies behind the current enthusiasm for this type of therapeutics.

The cortico-steroid derivatives are known to be used today in various conditions but in the not too distant future, a test may be produced which will enable the good responders to be detected so that there will be no need to rely upon trial and error. Hollander claims that in order for the hydrocortisone to be effective locally it is imperative that injection be made into the synovial space where it can bathe the entire inflamed surface. I feel, however, that with the use of Hydeltra T.B.A., if by chance one should miss injecting directly into the synovial space the drug will still bring about a result. Hollander further states that, as with any treatment in clinical medicine, this local use of the cortico-steroid derivatives does not produce relief of symptoms and signs in all cases, the reason being the mode of action of the cortico-steroid derivatives as still unknown to a certain extent.

The reasons why the drug acts as it does are as follows:

(1) Recent experiments have shown that the injected microcrystals of the cortico-steroid derivatives disappear quickly (within two hours) from the synovial fluid and are absorbed and retained by the lining of the synovial membrane.

(2) It has recently been determined that hydrocortisone, though somewhat more soluble in water than cortisone, is less soluble in blood plasma. Cortisone acetate is soluble in proportion up to 16 mg. per 100 cc. in plasma, whereas hydrocortisone acetate is soluble in proportion up to 2.2 mg. per 100 cc. of plasma. Thus cortisone acetate is actually more than seven times more soluble in plasma. Since this same situation would possibly take place with synovial fluid it is further possible that the relative insolubility of hydrocortisone or hydeltra T.B.A. enhances the local effect by slower dispersion from the joint.

Indications

1. In patients in whom one or two accessible joints are predominantly affected.
2. In patients who show improvement with systemic therapy and in whom one or two joints lag behind others. (In cortisone therapy J. H. Glyn claims that if they are treated effectively the whole condition improves.)
3. Assist in a rehabilitation program.
4. Reduce the size and discomfort which often arises from bursa.
5. Reduce the size and discomfort of tendon sheaths, i.e., ganglion.
6. Reduce the size and discomfort of Heloma Durum, Heloma Molle.
7. Reduce the size and discomfort of Hallux Rigidus.

8. Reduce the size and discomfort of Tailor's Bunion.

9. Reduce the size and discomfort of chronic sprains.

10. Gout.

11. Non-specific tenosynovitis, i.e., such as occurs following prolonged occupational strains.

12. Osteo-arthritis.

13. Calcaneal spurs (at times).

Many may wonder when to stop this kind of therapy. Upon investigation I found to be correct the following three reasons by J. H. Glyn for discontinuation of cortisone steroid derivative therapy.

1. Because of an unsatisfactory response.

2. Because of side effects which are dangerous or intolerable to the patient.

3. Because one suspects that the patient may have gone into a relative or complete remission and no longer requires the drug.

The dangerous side effects mentioned by this author occurred when large doses of the drug were given. Actually the side effects or the disadvantages in using this type of therapy in our field of work are relatively small. Some authors claim that the long continued administration of cortico-steroid will cause osteoporosis but the largest injection of cortico-steroid used in my work is 3 cc. spread out over a period of three treatments, one every week for three weeks. If no results are obtained after that time, it is recommended that no further treatment be instituted. Although some patients say they feel no different than when the therapy was first started, I have checked with those who claim this feeling, and a month or two later they have informed me that the heloma durum, hallux valgus, or other condition treated did not feel as painful as it had previously.

We have been told that hydrocortisone and hydeltra T.B.A. are anti-inflammatory in action. To answer this I quote J. H. Glyn again and explain the answer to the question as put to him.

Question. What evidence is available that hydrocortisone has an anti-inflammatory action?

Answer. (1) It greatly reduces total white cell content of the synovial fluid and simultaneously alters the lymphocyte.

(2) Synovial biopsies after injection show a definite diminution of inflammatory infiltration.

(3) The viscosity of the synovial fluid, usually very low in active inflamed joints, rises rapidly towards normal.

In using any type of drug therapy there must always be certain contraindications for its uses. In using the cortico-steroids and their derivatives the following contra-indications must be considered:

In patients with

(1) Uncontrolled diabetes
(2) Active tuberculosis
(3) Sites where infection exists
(4) Known sensitivity to procaine or its derivatives

In the use of this mode of therapy there are many reactions or symptoms that might occur, such as

(1) Area of injection might be very painful from 24 hours to a week
(2) No relief after one injection
(3) No relief after two injections
(4) No relief after three injections
(5) Complete relief of symptoms after the first, second, or third injections.

It should be noted here that there is a possibility that the post-injection soreness may be due to procaine, this drug having been used to anesthetize the path of the needle.

The rationale of cortico-steroid treatment is simply to arrest pain by local injection at the site of irritability, at the origin of pain radiation, or at the source of nerve supply to the involved part.

The number of injections might be determined as follows: If the pain returns after a treatment, usually with diminished intensity, the site is reinjected. This pro-

cedure may have to be repeated at intervals of from one to five days to three weeks depending on the severity of the complaint. This is the consensus of those who have written papers on this therapy. In my own case, as stated previously, patients are treated once a week. The question of dosage has been discussed many times. It may vary from 5 mg. to 30 mg. per injection in the foot. Since the metabolic and clinical responses of the patient, although generally predictable, are highly variable, the optimum dosage is not fixed. It is mandatory that the course of therapy undertaken with these agents be adapted to the individual.

It can be said that patients suitable for hormonal therapy can be classified as follows:

Those in whom hormonal treatment results in the restoration or preservation of certain essential functions, who may be relieved of discomfort and even disability by the administration of suppressive doses of hydeltra T.B.A., during the natural course of these disorders.

Upon the disappearance of pain and the inhibition of the classic signs of inflammation, it is agreed that a satisfactory therapeutic effect has been administered.

The cortico-steroids have provided podiatrists with a therapeutic agent possessing a scope of physiological and pharmacological activities equalled by few drugs.

It was inevitable that the initial reaction to the widespread uses of this agent in the treatment of crippling diseases previously refractory to available drugs should be associated with the enthusiasm that one will receive upon the use of this product.

For many patients, this drug may provide a non-specific means of controlling, at least temporarily, many metabolic and inflammatory disorders. It must be noted that this agent does not provide a biologic cure for a single known entity. Their careful, but imaginative use has created numerous effective therapeutic approaches where none had previously existed. It must be emphasized, however, that the hormones serve in no way as a substitution for standard measures of supportive treatment in the majority of patients.

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"No one is alone in his age; he builds on what goes before. The past and the present are the bases of the future."

Herder: The Philosophy of History 1774

PARENZYME INJECTION FOR PLANTAR WARTS*

A Preliminary Report

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ONCE again, as a preamble to an article on verruca, it is necessary to repeat the oft-used saying; plantar warts are a bane to the happiness of all podiatric and medical practitioners. This unhappiness is most assuredly shared by the patient.

To date, therapy has mostly been pointed toward destruction of the area by heat, cold, acid or some type of controlled sloughing and debridement. I, too, have followed this line of treatment. About five years ago I discarded all treatments in favor of sclerosing injections of Sotradecol®[1] 3%. This worked fairly well, but at times was too destructive. Many other injectables have been used such as Bismuth Sodium Tartrate,[2] Sodium Morrhuate, simple Procaine[3] and Vitamin A solutions.[4] The Vitamin A injectable at first appeared to me to be the last word, but perhaps due to my inability to perfect a good technique, results have been uninspiring.

At this point, let us discuss the pathology of the verruca. The following statement is excerpted:[5] "The verruca consists of hypertrophied branches of the papillae which are covered with squamous epithelium which has undergone hyperkeratotic changes and which forms large masses which appear between the elongated capillary loops. The epithelial cells, which dominate, undergo further keratinization and form irregularly appearing ridges on the superficial aspect of the lesion.

While the hypertrophic and hyperkeratotic changes are occurring within the growth, inflammatory changes are occurring in the pars reticularis, immediately beneath. Fibrosis occurs at this point, so that the verrucous mass is sharply separated by a fibrous wall which can be easily demonstrated when the mass is scraped from its attachment. This fibrous tissue is dense and has the appearance of the fibrous capsule found surrounding benign subcutaneous neoplasms."

Many will debate the presence of a capsule microscopically, but macroscopically, this appears to be the case. To me, the clinical signs of a capsule and the bleeding papillae when the area is scraped are of most importance.

As for the etiology of warts, at present the filtrable virus theory is most generally accepted. The following discussion may shed some further light. Wallace Marshall[6] states the following: "It is fairly well recognized that a keloid is one of the end results of trauma to the integument. Trauma, of one type or another, may produce hemorrhage through diapedesis or rrhexis. The presence of inspissated blood in the integument (and in other tissues as well) apparently attracts fibroblasts which begin to lay down connective tissue."

Marshall has produced tumors in the human which resemble keloids by injecting the cutaneous thigh areas repeatedly with human blood serum. The control sites on the opposite thigh, injected with saline, did not produce microscopic changes. Marshall quotes Filips in the same article, "The underlying cause of keloid formation is the hypersensitivity of the fibroblast and the vascular endothelial cells to any agent having the power to mobilize those elements in the protein of these cells which induce them to proliferate."

All of us know from clinical experience how vascular a plantar wart can be. We all have heard, too, about the wart that

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bled profusely and then disappeared almost overnight. From the aforementioned points, I drew this premise: If a verrucous area can be cleared of its inspissated blood and inflammatory processes, resolution should occur spontaneously. I concluded that this is the reason for the partial successes of the varied and sundry verruca treatments. Pursuing this premise, I decided to try Wydase.®[2] The enzymatic action of hyaluronidase hydrolyzes hyaluronic acid, a viscous polysaccharide found in the interstices of the tissues, where it normally obstructs diffusion of invasive substances. The package literature states, "Wydase increases diffusion and facilitates resorption of fluid accumulations (transudates or blood), as in postoperative edema."

The stated action of this drug seemed applicable to the treatment of verruca under my premise, so I undertook six study cases. The first responded to one injection, the other five not at all, even after six to eight weekly injections. I reverted back to older therapies.

Some months later I reviewed my theory and again felt it had merit. It was decided to try a product known as Parenzyme.®[3, 7] This product is an intramuscular trypsin. The trypsin is extracted from beef pancreas and purified by a special crystallization process which insures a uniform preparation of high potency. The product is available as an aqueous solution and an oil preparation. (I am using Parenzyme in oil at this time.)

In inflammatory and edematous processes, fibrin macromolecules are trapped in the fine mesh wall of the capillary and connective tissue. These fibrin deposits block free flow of body fluids and impede the resolution of inflammation and the resorption of edema fluid. Trypsin administered intramuscularly appears to be concentrated in such areas, where it decreases the size of these fibrin molecules by depolymerization. Thus the free flow of blood and other body fluids is restored; tissue repair is accelerated. Administering this drug directly into verrucous areas appears to produce faster results than if used intramuscularly.

I have recently been in touch with Davidson[8] who has independently experimented with this product. Our results have been parallel and uniformly good. Following are some illustrative case histories:

1. D.E. (Male—16 years), single verruca, ball right foot. Duration—three months.

2-1-58—Area anesthetized with two cc. of 2% procaine by subcutaneous infiltration. ¼ cc. parenzyme in oil injected through same puncture site, intra and subcutaneously. Use dry tuberculin syringe and twenty-two gauge needle. Inject very slowly and keep needle superficial. Patient took injection very well and had only mild post injection pain.

3-1-58—Area examined and found to be completely free of verrucous tissue.

Disposition: Discharged.

2. Mrs. P. (65 years), single verruca, ball right foot. Duration one month. This growth was about two inches away from another wart site, eradicated by electrodessication two months previously.

2-22-58—Area treated exactly as in Case One. Three days later, patient called to say foot hurt and felt swollen at site. A week later she came in for examination. The area was indurated directly beneath the verruca and fairly painful to touch. Nothing further was done except to re-pad the area. Two weeks later the wart had uneventfully progressed to dissolution.

Disposition: Discharged.

3. G.W. (Female—16 years), single verruca, under fifth metatarsal head, right foot. Duration, three months.

3-1-58—Area treated as in Case One. This patient had severe pain during the injection.

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3-15-58—Patient reported she had pain during the first post-injection day. Pain subsided thereafter. The wart is now painless, shrinking in size and soft to touch. Some overlying callus was trimmed without striking any capillaries.

3-22-58—No pain, complete remission.

Disposition: Discharged.

4. Mrs. W. (Thirty-five), single verruca, plantar surface, left heel. Duration, three months.

3-4-58—Treated as in Case One. Patient complained of a bad burning pain, "Like a wasp sting," and left the office limping. That evening she called and requested an Rx for a narcotic.

3-25-58—Patient reports the Rx relieved the pain nicely. Area shows slight overlying callus which was debrided down to soft epidermis. No sign of verrucous tissue.

Disposition: Discharged.

5. J. McK. (Male—20 years), single verruca, large, under fifth metatarsal head, right foot. Duration, six months.

3-13 58—Treated as Case One except dose of parenzyme in oil increased to 1/3 cc. The injection was extremely painful and caused a subcutaneous blood seepage which could be seen occurring. The severe pain lasted about five minutes and gradually subsided.

3-29-58—Patient stated that the pain the first night was bad enough to take sedation. On the second day the pain was negligible, and is now painless. The area had some callus over it. When the callus was removed some dead extravasated blood was expressed.

4-12-58—Area clear. Disposition: Discharged, no verrucous tissue.

The major disadvantage with this therapy is the pain factor. Many suffer pain even under anesthesia. Some have more pain as the anesthetic wears off; some report only mild pain, some a burning or stinging sensation. The pain should not deter the use of this technique. Routine use of postoperative narcotics for the first day is indicated.

A report on the use of parenzyme in oil for plantar verrucae has been made. Some case histories are shown. Theoretical reasons for the mode of action have been stated.

Kresge Building

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"All the strength and force of a man comes from his faith in things unseen. . . . Clear, deep, living convictions rule the world."

James Freeman Clark

OFFICE MANAGEMENT OF INTERMETATARSAL NEURALGIAS

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THE treatment that will be described here is for intermetatarsal neuralgia, but can be successfully used in any neuralgia affecting the foot. I have found that this course of treatment has great value in my offices. When we see the regular pattern of the so-called intermetatarsal neuralgia, we must not overlook other numerous possibilities. A careful history will usually rule out many, and a well done examination will rule out still others. It is important to differentiate, for instance, peripheral vascular disease, arthritis, myositis, fracture, strain, trauma, neoplasms, etc. The shoes and stockings of the patient should not be overlooked and daily working habits also studied. A series of clear roentgenograms taken at various angles will aid greatly in our diagnosis. Only after we have eliminated all other possibilities can we assume a diagnosis of neuralgia. Too often what was originally diagnosed as an intermetatarsal neuralgia, or other neuralgia, was actually some other condition.

After satisfying ourselves as to the diagnosis, the patient is advised that proper treatment will require a series of injections and pads, for a course of treatment of about four weeks. There will be two office visits the first week and then once every week for three more weeks. At the end of this period, if the patient has not made a satisfactory recovery, it is well to review the case. If a complete review confirms the original diagnosis, a flexible support with elevated area along the metatarsal shaft involved may give relief.

The regimen consists of the use of local anesthesia for therapeutic purposes, mild sedation and vitamin therapy. It includes a series of injections, pads, and a prescription.

The first week, the patient is seen on two occasions. It is best to arrange the visits approximately 4-6 days apart. The first treatment step is an intermetatarsal injection of a local anesthetic. I prefer Novocaine℞1 2%. Prepare a solution of Wydase,℞2 (dissolve the powder in 1 cc. of distilled sterile water for injection). Withdraw 2½ cc. of the 2% Novocaine into a 3 cc. syringe with 1¼" 25 gauge needle. Inject slowly, as the needle passes through the tissues proximal to the head of the metatarsal bone involved, and direct it toward the shaft and along the shaft, toward the base of the metatarsal bone. After 1 cc. has been injected in this manner, the needle is withdrawn approximately 1" and then is directed toward the adjacent metatarsal bone, and the injection made slowly as before. The needle is then withdrawn again about 1" and is now directed deep, toward the bases and between the metatarsal bones, injecting the remaining ½ cc. slowly, as the needle goes into the deeper tissues. The needle is left in at this point, and ½ cc. of the Wydase solution is injected through the needle.

The area is again cleansed, and now a felt pad ¼" thick, and ½" wide is adhered to the foot plantar to the metatarsal, including the head, and running along the shaft to approximately the proximal 1/3 of the shaft. It may be covered with a strip of adhesive tape, if desired.

The patient is then given an intramuscular injection of Manibee℞3 1 cc. Darvon Compound capsules are prescribed, 21 capsules, one every 6 hours. This should last the patient a week. The patient is then told to return in five days, and the same procedure is again repeated, with the ex-

*Clinician, Foot Clinics of New York

℞1 Winthrop Laboratories
℞2 Wyeth
℞3 Endo

ception that Darvon Compound is not prescribed.

The patient is advised that there may be a mild swelling of the area, itching, or smarting. Should any other symptoms arise, she is instructed to call the office. There is usually no discomfort after the treatment, but should the patient complain of severe itching, I prescribe an antihistaminic, such as Benadryl® Hcl. capsules 50 mgs. #7 one daily, will suffice. If there should be excessive swelling and heat with some pain, then she is told to apply an ice pack to the foot for 15 minutes every 2 hours.

When the patient returns for the next visit, the same procedure is repeated, with the omission of the injection of Wydase this time. The fourth visit repeats the third.

For the final treatment, 1 cc. of 2% Novocaine is injected slowly as the needle passes through the tissues. The injection is started just proximal to the metatarsal head in question, and is passed toward the interspace, at an angle, toward the base of the adjacent metatarsal bone. After the Novocaine has been injected, the syringe is removed, leaving the needle in place, deep in the tissues. 1 cc. Efocaine® is taken with syringe, and injected by slowly withdrawing the needle approximately ½". It is advised not to give this injection into the superficial tissues, since it may cause some pain. Allow the needle to remain in the tissues for approximately 10 to 15 seconds, to prevent any backflow of the solution.

A pad is then applied to the foot, as in the previous treatments, and also an injection of the Manibee given. The patient is then instructed to return in one month for a checkup. Usually at the checkup visit, the patient has no longer any complaint. It is further advised to have the patient return to the office in three months, at which time any orthopedic work can be carried out if necessary. This regime is extremely useful in anxious, neurotic and pain-fearing individuals, who are skeptical at getting results in their feet. These patients usually have sought help from many other sources and must be given results in a very short period of time. Of course, standard precautions, as with all injections, are observed.

Roberts Building

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PODIATRY AND PUBLIC HEALTH*

DANIEL LEO FINUCANE, M.D.†
Washington, D. C.

MR. CHAIRMAN, officers and members of the Federation of Chiropody Boards, and of the National Board of Chiropody Examiners,

I am glad to be with you this morning to welcome you to Washington, to have the opportunity to hear something of your programs and progress, and to share with you some ideas on developments in public health and related fields.

To those of us in public health, one of the most striking developments over the past 15 to 20 years has been the strong trend toward cooperative thinking and action

* Address before the Federation of Chiropody Boards and National Board of Chiropody Examiners at the Annual Meeting of the American Podiatry Association, Washington, D. C., August 1958.

† Director of Public Health, Washington, D. C.

among a wide array of professional skills and community groups.

Yesterday, a health department was often tucked away in a rather isolated office, where the small staff carried out its restricted duties with little attention from the public or anyone else.

Today, a modern health department not only needs many more kinds of professional and subprofessional personnel to carry out its integral programs, but it must also depend heavily upon many cooperative relationships within and outside its immediate area to get its job done effectively, and there is a very considerable interest in what that health department is doing.

All medical and pharmaceutical groups have moved ahead in this manner, and to me this is the most hopeful and productive kind of progress.

Certainly your own profession has shown concomitant advancement in stature, standards, and perspective. You may well feel considerable pride in your accomplishments, but I see no evidence of self-satisfaction among you; rather, I note your commendable eagerness to cooperate and participate continuously in community activities and programs which are concerned with the total health and welfare of our citizens.

In public health we wholeheartedly welcome your interest, for it is mutually beneficial. It will enable all of us to see a more rounded picture of those things which can contribute to the vitality of a community.

The major reason for our broader outlook is, of course, the recent advances in the medical sciences which have provided new tools and incentives.

In former days, a health department had necessarily to devote practically all its efforts and funds to the control of communicable diseases and sanitation activities. Facilities and resources were comparatively scant. There was no time to think of wider horizons in those days when such diseases as diphtheria, typhoid, smallpox, malaria, pneumonia, tuberculosis, and gastro-enteritis were the great problems—the great killers; and when infant and maternal mortality rates were distressingly high, and half of all deaths occurred in those under age 35.

At this point, I could quote statistics, but I will skip the figures. I will say only that now we have moved to much more comfortable levels in public health insofar as these diseases and problems are concerned.

It is true that other complexities have evolved from our rapidly changing population and economy to take the place of the old issues; nevertheless, the newer medical discoveries and techniques have provided a challenge and stimulation of remarkable proportions.

They have contributed substantially to our longevity, to the increase in our population, and to the vitality of our economy. They have also brought about a lively interest of the people in total health.

Perhaps the average citizen seems to take a great deal too much for granted in his environmental background—in the day-to-day health protection devices that surround him and his family. Even so, he generally give us far more community participation and support than we ever had before; and he is more aware of the potentials for health available through both private and public resources.

From these optimistic remarks, I would not want anyone to think that I believe that all our public health problems are solved—far from it.

Every day we are faced with new problems, which require study and the cooperation of many disciplines to provide the answers.

We are in a transition period of trying to put into effective action all the new techniques and knowledge that have come to us through wide-ranging research—and to do this within the limitations of budget and shortages of trained personnel.

While still maintaining control over the communicable diseases, we are now concerned with the chronic diseases which have become prominent as more years have been added to our lives.

We are deeply involved with mental health, air and water pollution, radiological health hazards, the provision of sanitation services and facilities to fast-growing urban and suburban areas, new industrial and occupational health issues, and the high accident rate—which ranks first as cause of death among children and young people up to 25 years of age.

To put it another way—most health departments are hard pressed to keep up with the issues evolving from the vitality of this nation—more housing, more babies, expanding industry, new occupations, mushrooming communities, and the amazing mobility of our population.

A great part of our difficulty is that we need more professional personnel in public health with the specialized training to carry out the newer techniques and programs. We might say that our public health programs have kept up with the times, but our supply of skilled personnel has not.

In addition to public health physicians and nurses, we need nutritionists, biostatisticians, psychologists, research analysts, sanitary engineers, health educators, toxicologists, veterinarians and many others, with skills to carry out today's programs.

I believe that eventually we shall close the gap between what we know and what we are currently able to apply in public health programs. I am encouraged by the interest of Congress in our problems arising from shortages in personnel, facilities, and funds, and the steps that have been taken to help us get over the transitional gap, which will enable us to move more actively and widely into those programs which are aimed toward the *prevention* of disability and death, and toward useful rehabilitation. In these areas, the economic and humanitarian gains are tremendously worthwhile.

Here you can give perhaps the most valuable assistance. You have already given substantially in the following ways in the District of Columbia:

1. Podiatry participates regularly every year in diabetes detection drives through contributions, through professional interest and knowledge, and through office examinations of urine specimens.

2. The services rendered by local podiatrists, without remuneration, in various hospital clinics established initially in conjunction with metabolic and peripheral vascular services.

I credit your skills with the fact that some of the clinics have been broadened to include more extensive services, such as surgical and orthopedic problems of the foot.

Garfield Hospital, now a part of the Medical Center, has had a Podiatry Clinic for well over 15 years. Others are at Georgetown, Freedmen's, and formerly at Emergency before it became a part of the Hospital Center.

Our own District of Columbia Department of Public Health now has available at D. C. General Hospital, for the first time, in the current budget for the fiscal year which started July 1st, a full time salaried position for a podiatrist.

3. The District of Columbia Podiatry Society has, over a 20-year period, conducted various free clinics and examination surveys in public schools and institutions for the detection of foot defects and ailments in growing children.

In many instances, treatment is given on the scene, or in the office of one of the contributing podiatrists. Usually, standards for improved hygiene and education concerning foot health are established through cooperation with public officials and Parent-Teacher Association groups.

4. For a 5-year period from 1948 to 1953 a needy-shoe-fund was established and operated by the D. C. Podiatry Soiety. Monies

donated from many sources were collected and distributed by the local society on behalf of needy children for shoes and special appliances.

Your participation in public health programs should and undoubtedly will be greater as we are able to get ideas into action on a gradual basis. As I indicated earlier, health officials are expanding, changing, experimenting and exercising their imagination; but it takes time to adjust and provide for new activities, because the limitations must be faced and a certain degree of patience must be practiced.

I see the improved coordination of podiatry into public health as a two-way effort: Ours, to be aware of the kind of expert help you can give in particular programs; and your part is to prod us with ideas from time to time. Meanwhile, I wonder if your public education program could be expanded. Have you considered some of the principles and techniques that have been used successfully in other areas of health?

Is there general awareness of the years and kind of academic training a podiatrist needs in order to qualify for a license to practice his profession?

Is it known well enough and widely enough (and I include the public in this) that podiatry can detect early signs and symptoms in the vascular diseases, in numerous arthritides, in metabolic or endocrine disorders, blood dyscrasias, and dermatologic disorders?

Is it also known well enough that it takes your kind of professional knowledge of anatomy, physiology and pathology to correct and compensate effectively the aching maladjustments of so many feet—too many aching feet in this modern world of stylish shoes, hard pavements, too little walking, too much sitting and riding?

I am not going to go further into your professional abilities because you know them through your own long training, experience and dedication to the profession, but I will say that these abilities have a definite place in such programs as the following:

1. Chronic disease screening programs, where we examine for heart conditions, cancer, diabetes, tuberculosis, and the like, and refer all suspect cases to private physicians, or if medically indigent, to public treatment services.

2. School health surveys, where the early detection of foot defects can be most productive and educational, and an area where we can practice preventive medicine in its truest sense.

3. Rehabilitation programs for the chronically disabled and for the aging, aimed toward making them more self-helpful and productive, and particularly in extending the useful life of aged people. Undoubtedly, you could often give help in alleviating a gait disturbance or faulty locomotion. This could, in turn, cut down on injuries from accidents and falls.

4. Industrial hygiene programs, where once again your work could be highly productive in preventing accidents, in decreasing fatigue and absenteeism, and adding substantially to the health and comfort of workers on the job.

I have tried to point out in this discussion that public health is faced today with many problems, problems that did not exist twenty years ago, and problems for which we do not yet have an answer; and to develop these answers, we need the help and cooperation of all disciplines concerned with the health of our society.

With each forward step we take in health and medical fields, new issues will arise. Such is the price—and the challenge—of progress.

Department of Public Health

CLINICALLY SPEAKING

A place for the more informal presentation of reminders, suggestions, notes, observations and technics of value in office practice. Your contributions of short manuscripts or illustrative case histories will determine this section's usefulness.

A STERILE DISPOSABLE SYRINGE

F. B. STREIKER, D.S.C., F.A.C.F.O.
Chicago, Ill.

A STERILE disposable plastic hypodermic syringe* is now available to the podiatrist for use in his daily practice. This syringe does away with the need of all types of sterilizers used in our offices for the sterilization of syringes and needles. They are sterile when you receive them and they are sterile when you use them. Heat pressure-chemical sterilization (Griffith Process) is absolute in attaining this. They are safe—one time use prevents cross infection. They are sharp, giving maximum patient comfort with stainless steel, factory sharp, disposable needles. They are versatile, being suitable for injection or blood sampling. They are economical, eliminating costly re-sterilization process. They are efficient, insuring contamination-free specimens for analysis—no hemolysis. Insulating quality of plastic and air-tight rubber plunger, retard coagulation.

There is a wide assortment of accurately calibrated syringes in popular sizes with a choice of needles. No "flash-back" can occur. The needles are swaged on the 2 cc., 5 cc. and the tuberculin syringes. These needles are put on with thirty pounds of pressure so that they will not come off while injecting. The guard of the syringe is very comfortable in use and may be used with up to three hundred pounds of pressure on injecting medications. The maximum amount of pressure used during injections is sixty pounds of pressure. The hub of the needle is brass and the needle itself is #18 stainless steel. The needle can be bent but it will not snap off. The needle is sharpened on its three surfaces, the flat surface and both sides. The usual needle is sharpened only on its flat surface. The needle makes an incision on entry into the skin and not a puncture.

Only those ingredients that are harmful to polystyrene, such as formalin or acetone, can cause disintegration of the syringe and as these chemicals are not used for injection, we can safely say that it is a practical syringe.

The syringes are packed one hundred to a carton in 2 cc., 5 cc., 10 cc. and tuberculin type. The 2, 5 and 10 cc. syringes come in the following gauges and lengths:

20 gauge—½"—1"—1¼"—1½"
21 gauge—1"—1¼"—1½"
22 gauge—1"—1¼"—1½"
23 gauge—¾"—1"—1¼"
24 gauge—¾"—1"
25 gauge—⅝"—1"

Tuberculin Syringes:

25 gauge—½"—⅝"	27 gauge—½"
26 gauge—½"	28 gauge—⅜"

There are no breakage costs or accidents. They are easily stored, ready for immediate use. They can be carried in your bag without fear of contamination. They are recoverable as medication charges on your income tax and are insurance company acceptable. (Award of the syringe with the needle snapped off is a child's delight following an injection.)

The technic of its use is to cut off the end of the sterile envelope, showing the needle size. Let the syringe slide out into the hand-plunger end first. Inject sterile air into the vial of medicant after breaking

*Steri-Syringe, 2301 N. Racine Avenue, Chicago 14, Ill.

lock of plunger in barrel by a clockwise turn of the plunger. Withdraw medicant. Use as a standard syringe. Insert needle back into needle guard, break off syringe and discard. Needle may be removed from syringe with forceps when one desires to add more medicant to syringe while the needle itself remains within the tissues.

Summary

A new sterile disposable plastic syringe is being reported which does away with chemical and heat sterilization, prevents cross-infection, practically painless on injecting, can be used with all medicants now used in podiatry and is inexpensive in cost.

4010 W. Madison Street

FOREIGN BODY OF GLASS—
A Case Report

WILLIAM O. NANKEE, D.S.C.
Compton, Calif.

A CAUCASIAN male, age seven years, was brought to the office by his father for consultation. Chief complaint—corn on bottom of left foot.

Subsequent inquiry revealed that the onset had been gradual, following an incident where the child had stepped on "something" while barefooted. This had happened eight months previously.

Examination revealed a lesion that appeared to be a keratoma beneath the second metatarsal head. Reduction of the excrescence revealed a very minute sinus in the bottom of the lesion. A probe inserted into the sinus elicited a slight crepitus. X-rays revealed a spindle shaped foreign body lying on the tibial plantar aspect of the second metatarsal head.

Following proper aseptic preparation of the site, three cc. of 1% Cyclaine®[1] were injected into the sinus. The sinus tract was

Fig. 1. Splinter of plate glass foreign body.

widened by sharp dissection to expose the base of the foreign body. After some difficulty, the foreign body was grasped and removed in toto with a mosquito forceps. Examination of the foreign body revealed a fragment of plate-type glass 13 mm. long, 3 mm. wide and 2 mm. thick. Recovery was uneventful.

Conclusions

1. A considerably large piece of sharp glass was lodged beneath a weight bearing surface for approximately eight months with very minimal symptoms.

2. This case might easily have been misdiagnosed as a corn, papilloma, verruca or similar excrescence.

3. In the treatment and diagnosis of plantar lesions, the possibility of foreign body should be eliminated.

1313 E. Compton Blvd.

®[1] Merck Sharp & Dohme

"Where science can neither prove nor disprove we are justified in having faith."

J. F. Randall, Jr.
The Making of the Modern Mind

JOURNAL
OF THE
AMERICAN PODIATRY ASSOCIATION

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3301 Sixteenth Street, N.W., Washington 10, D. C.

A. RUBIN, D.S.C., Editor

Communications regarding manuscripts, news items, and editorial matters should be addressed to the Editor, those regarding advertising to the National Advertising Representative.

PRESIDENT'S PAGE

Medical and Dental Relations Have Many Facets

Our effort as a profession to practice on the highest ethical plane and be a quiet younger brother to medicine and dentistry has been very successful. I am – and you must be – proud of our achievements in controlling unethical advertisements and conformance to our code of ethics. These laudable efforts must be continued! Possibly our colleagues in medicine and dentistry are aware of these efforts and are favorably disposed to them. However, we have neglected too long our duty to inform our medical colleagues of our educational development and scientific achievements.

The president of the New York Medical Society said of us a few years ago, "Podiatry must not hide its light under a bushel. You must keep medicine informed. Podiatry cannot expect medicine to make the effort to stay abreast of its progress."

A responsibility we were slow in fulfilling was the formulation of a national policy – a delay probably due to our taking for granted that everyone outside the profession knew our intentions. We were derelict in not having a national policy to inform those outside the profession and to serve as a guide to our own ranks. This lack of policy resulted in variations in state laws governing podiatry-chiropody and certainly resulted in medicine asking, "Where is Chiropody Going?" in an article in Medical Publication Economics.

The best way for us to emphasize to all the world that we are "foot doctors" and wish to remain so, would be for the very few states whose laws legally qualify us to treat hands, to remove that section of their practice acts at the earliest opportune time. The sooner these inconsistencies are corrected, the better will be our medical relations.

George E. Guenzler, D.S.C.

ANOTHER DOCTOR-PATIENT RELATIONSHIP

In ancient Rome "caveat emptor," *"let the buyer beware,"* was the guide for commercial dealings. Many regulatory statutes, fraud laws, and registration and licensing agencies have today reduced considerably the dangers an individual faces in purchasing commodities and services. But even today the same relationship, though ameliorated, exists between the buyer and seller. "Puffing" is a common advertising practice and a large segment of our population secretly envies and may even admire the "success" acquired through "sharp practices."

In rendering a professional service, however, the reverse of this situation is our standard today. Especially in the Doctor-Patient relationship does society place the onus on the "seller" of services and the "buyer" places full confidence in his Doctor. The patient does not "beware" of his Doctor. Misconduct charges in the professional association and malpractice suits in the law courts "reward" the violator of professional standards.

Being honest is not enough for a doctor. Society expects and even demands competence. It becomes the doctor's responsibility to constantly improve, broaden and deepen his knowledge and techniques. His education has only really begun upon the receipt of his professional degree. Penicillin, ataractics, relaxants and many other common pharmaceuticals were unheard of, or unavailable when most of today's practitioners were attending professional school. Ultrasound was not a practical therapy. Hormone physiology was not far enough advanced to permit cortico-steroid therapy.

To keep abreast, the modern doctor must read his journals, even the advertising pages, attend meetings and take refresher and postgraduate courses. To help him, the pharmaceutical industry and supply and equipment manufacturers advertise in professional periodicals, exhibit at meetings and conventions, even send detail men right into the offices.

It is the doctor's responsibility to search out, accept and critically evaluate all professional information. We hope that the publication of papers in our journal by grouping them into issues devoted to special subjects, such as this one, previous issues, and future ones, will assist you.

EXECUTIVE COUNCIL MEETING

The executive Council of the Association met in Washington, D. C., for a three-day session, November 7-9, 1958.

VOCATIONAL GUIDANCE LITERATURE

Please see Page A15 for sample of the Association's new Vocational Guidance leaflet. This is available in quantities for distribution by you in your community.

TECHNIQUES IN FOOT SURGERY

L. R. McCAIN, D.S.C., F.A.C.F.S., and N. H. KETAI, D.S.C., F.A.C.F.S.
Editors, Publications Committee, A.C.F.S.

Illustrated case reports and discussions, suggesting approaches to podiatric surgery, from the files of the American College of Foot Surgeons.

SURGICAL CORRECTION OF RETROCALCANEAL BURSITIS (HAGLUND'S DISEASE)

A MALE patient, aged 40, seen at the hospital, was unable to tolerate shoe pressure because of tenderness in the area of the attachment of the Achilles tendon. All conservative approaches including rest, injections, and strappings had failed to give relief.

Roentgenograms showed an enlargement of the posterosuperior angle of the calcaneus.

Urinalysis: 1.020; acetone and albumin negative; sugar two plus (re-evaluated later as a trace).

Blood sugar 115 mg. Blood count: Hemoglobin 103%, W.B.C. 8,600, R.B.C. 5,100,000.

The patient was given 1½ gr. Nembutal Sodium,[1] and atropine 1/150 grs. preoperatively. Sodium pentothol was the general anesthetic used.

Operative technic was as follows: A linear incision 12 cm. long was made medial to the Achilles tendon, extending from the medial malleolar tip to the base of the heel. The skin with subcutaneous tissue was dissected and retracted. The Achilles tendon was dissected free from its attachment to the calcaneus. The posterosuperior angle of the calcaneus was removed with osteotome and mallet—3 cm. in diameter with a thickness of .75 cm.—and rasped smooth. The retrocalcaneal bursa was dissected free and removed. The Achilles tendon was replaced, sutured with 00 chromic catgut and the skin closed with continuous 0000 black silk sutures. The foot and lower leg were cast in 30° extension.

The patient was given Demerol Hcl.[2] 100 mg. p.r.n. postoperatively.

Postoperative treatment was as follows: The cast was removed on the thirteenth day, and an elastoplast dressing applied. The sutures were removed on the sixteenth day, and sterile dry dressing made. Redressing was made in ten days, thirteen days and fifteen days with Neosporin.[3] On the twentieth day after removal of sutures a dry sterile dressing was made. The results were satisfactory; however, convalescent period was prolonged because of a postoperative fall and injury to operative site.

Robert L. Rutherford, D.S.C.

Comments: Exposure of the retrocalcaneal bursa and removal of the superoposterior angle is often difficult through the medial approach. Many surgeons use a transverse incision with a convexity superiorly on the posterior of the heel at a level superior to where the posterior of the shoe will strike. The Achilles tendon is then cut obliquely downward and outward, forming an inverted Y with each limb being approximately one-half inch long. The tendon flaps are retracted, the bursa removed and the bone removed. The tendon is sutured and skin closed by suturing. A cast is applied and the patient allowed to walk in one week. The cast is usually removed at the end of three weeks.

The above is mentioned to illustrate another approach.

[1] Abbott

[2] Breon and Winthrop

[3] Burroughs Wellcome & Co.

Also, is some instances the tendon is left intact and the above work done.

L.R.M. & N.H.K.

SURGICAL CORRECTION OF OSTEOMYELITIS FIFTH TOE

A MALE patient, aged 39, seen in the clinic, had a deep ulceration on the lateral aspect of the fifth toe right foot. There was a history of acute infection of six weeks duration following self treatment. Roentgenograms showed a degeneration of the head of the proximal phalanx and an involvement of the middle phalanx.

Urinalysis: Reaction-Acid 6.0, Spec. Gravity-1.022, Negative to Acetone, Sugar, Diacetic Acid and Bile.

Blood count findings: Hemo. 13.8 g., W.B.C. 4,500, R.B.C. 4,850,000, Stabs. 1, Segs. 59, Lym. 32, Mon. 5, Eos. 3.

The patient was given Nembutal®[1] gr. 1ss preoperatively.

After sterile procedure the toe was blocked with 3 cc. Xylocaine®[2] 1%.

Operative procedure was as follows: Straight dorsal and plantar incisions were made along the long axis of the toe beginning at the base of the proximal phalanx, and carried distally to the middle of the proximal phalanx. A lateral transverse incision was made joining the first and second incisions at their distal extremities. The lateral flap was dissected free and retracted posteriorly. A medial incision was made joining the first two and through the distal part of the toe web. The extensor and flexor tendons were dissected free, drawn down, sectioned and allowed to retract. With bone forceps the toe was amputated at the junction of the base and shaft of the proximal phalanx. Closure was effected by medial approximation of the flap to the skin in the web space. A drain was inserted and dressing applied. Twelve 000 dermal sutures were used for closure of the wound. Two cc. Kutapressin®[3] and 2 cc. Combiotic®[4] were used.

The analgesic given was Methadone®[5] 7.5 mg.—Sig. 1 q. 4 hr. p.r.n. pain.

Postoperative treatment was as follows: The following day 2 cc. Combiotic was used. On the third postoperative day dry sterile dressing with 2 cc. Combiotic was made. On the sixth day the drain was removed, 2 cc. Combiotic used and dry sterile dressing made. On the ninth day the sutures were removed and dry sterile dressing made. On the fourteenth, twenty-first and twenty-third days, the patient was given whirlpool treatment and dry sterile dressings applied.

The patient was partially disabled for three weeks. Acute disability was for a period of two weeks. The results are good to date, nine months following surgery.

James W. Hembree, D.S.C.

Comments: This is an example of another type of surgery seen in the chiropodist's office. It is one of the few cases seen in which amputation of a toe is necessary.

L.R.M & N.H.K.

®[1] Abbott ®[2] Astra ®[3] Kremers-Urban ®[4] Pfizer ®[5] Abbott

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Never slight yourself on a good bed or a pair of good shoes. You are in one or the other of them most of your life.

"View Pointers"

PHARMACEUTICAL PREPARATIONS FOR THE PROFESSION

HARRY L. HOFFMAN, Ph.G., D.S.C.
Chairman, Council on Podiatry Therapeutics and Pharmacy

A column devoted to preparations, new and old, with emphasis on their value and uses in everyday chiropody practice. This is a regular monthly column prepared from information furnished by the pharmaceutical house. We invite questions, which we shall endeavor to answer, or obtain the answer.

Myoflex Creme

Description: Triethanolamine salicylate (W-T) 10% in a nongreasy base.

Properties: Topical application of Myoflex to the skin of humans was followed by traces of salicylate (conjugated) in the urine in 2½ hours and a strong urinary salicylate response after 5 hours. Using the cup method in muscle tissue, the zone of penetration with Myoflex measured at least 8 to 10 times the radial distance obtained with ordinary analgesic ointment.

Indications: Sore muscles and joint attachments, stiffness and sprains. Excellent as a cream for patients with minor rheumatic stiffness and soreness of the feet.

Advantages: 1) Free from counter-irritating and peripheral vasodilating properties and does not stimulate blood circulation at the affected area, thus avoiding undue dissipation of the local analgetic activity following application; 2) Extraordinary penetrating properties of the new organic amino salicylate derivative; 3) Provides quick relief; 4) Objectionable redness of the skin does not develop and there is no irritating vapor to cause smarting of the eyes; 5) Bland, harmless, free from side effects, nonsensitizing—safe to use at any age; 6) Free from medicant odor and may be used at any time of the day without interfering with the patient's normal activities. When thoroughly massaged into the skin the patient's customary footwear can be worn directly over the skin area to which Myoflex has been applied; 7) Nonstaining.

Directions: Apply locally once or twice daily with or without infra-red, diathermy, ultrasonic, etc.

Supply: In 1 ounce tubes and 1 lb. jars. By Warren-Teed Products Co., 582 W. Goodale St., Columbus 8, Ohio.

Cort-Quin™ Creme ½% or 1% (pH 4.5)

Description: A topical creme especially useful in dermatoses resistant to other types of treatment. Contains micronized hydrocortisone (free alcohol) ½% or 1% and diiodo-hydroxyquinoline 1% in the exclusive Acid Mantle base.

Indications: In a wide variety of subacute and chronic dermatoses complicated or threatened with invasion by bacteria, fungi and protozoa.

Administration: Apply lightly to affected area once or twice daily. When unresponsive organisms are encountered, adequate therapeutic measures for their control should be instituted.

Supply: With ½% or 1% hydrocortisone in ½ oz. and 1 oz. tubes. By Dome Chemicals Inc., 109 West 64th Street, New York 23, N. Y.

Cort-Dome™ Creme or Lotion (pH 4.6)

Description: Contains micronized hydrocortisone (free alcohol) in the exclusive Acid Mantle® base. For topical application.

Indications: Atopic dermatitis, contact dermatitis; pruritus ani, pruritus vulvae, infantile eczema, housewives' eczema, lichen simplex chronicus, intertriginous seborrheic dermatitis, radiation dermatitis, and re-

lated skin disorders. When secondary infection is present or anticipated, Neo-Cort-Dome™ is indicated; and in stubborn dermatoses accompanied by increased scaling and lichenification with secondary infection, Cor-Tar-Quin™ should be used.

Administration: Apply lightly to affected area once or twice daily. When infection complicates or threatens, Neo-Cort-Dome Creme or Lotion should be used.

Supply: By prescription only. Creme with ¼% hydrocortisone in 1 oz. tubes; Creme with ½% hydrocortisone in ½ oz., 1 oz., and 4 oz. tubes, and 1 lb. jar; Creme with 1% hydrocortisone in ½ oz., 1 oz., and 4 oz. tubes, and 1 lb. jar; Creme with 2% hydrocortisone in ½ oz., 1 oz., and 4 oz. tubes; Lotion with ½%, 1% and 2% hydrocortisone in ½ oz., 1 oz., and 4 oz. squeeze bottles. By Dome Chemicals Inc., 109 West 64th Street, New York 23, N. Y.

Cor-Tar-Quin™ Creme and Lotion (pH 5.0)

Description: Contains ½% or 1% micronized hydrocortisone (free alcohol), 2% Liquor Carbonis Detergens and 1% diiodohydroxyquinoline in the exclusive Acid Mantle vehicle.

Indications: Combines conventional treatment with specific management in a wide variety of subacute and chronic dermatoses and in dermatitis complicated or threatened with invasion by bacteria, fungi or protozoa, including chronic infectious eczematoid dermatitis, atopic dermatitis (including neurodermatitis and infantile eczema), pruritus vulvae et ani, inflammatory allergic and industrial dermatoses, poison ivy, housewife's eczema, lichen simplex chronicus, pyoderma, senile itching, kraurosis vulvae, psoriasis, nummular eczema, otitis externa, eczema of the eyelid, insect bites, and many other skin conditions that have proved refractory to treatment with steroids alone, or to treatment with coal tar alone.

Administration: Apply lightly to affected area once or twice daily.

Supply: By prescription only. Creme with ½% and 1% hydrocortisone in ½ oz., 1 oz. and 4 oz. tubes. Lotion with ½% and 1% hydrocortisone in ½ oz., 1 oz., and 4 oz. squeeze bottles. By Dome Chemicals Inc., 109 West 64th Street, New York 23, N. Y.

Dome-Paste® Bandage

Description: Improved, flesh colored Unna's Boot (zinc oxide, gelatin paste on gauze). Non-fraying, non-raveling.

Indications: Leg ulcers (diabetic), thrombophlebitis, stasis edema, chronic venous insufficiency associated with varicose veins, varicose eczema, lymphatic edema, post-fracture conditions of the leg, edema of pregnancy, simple weakfoot complaints.

Administration: Cover the leg approximately three times, completing within an inch or two below the knee. Allow bandage to harden. Complete directions for applying are given on the package.

Supply: Air-tight polyethylene bag containing one 4-inch-by-10-yard bandage. By Dome Chemicals Inc., 109 West 64th Street, New York 23, N. Y.

"The true and lawful goal of science is this: That human life be endowed with new discoveries and powers."

Francis Bacon
The Organon

PODIATRY-CHIROPODY ABSTRACTS

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Los Angeles, Calif.

Editors of Local, State and Regional Publications are requested to provide copies to the Chairman of the A.P.A. Committee on Publications who is preparing this section of the Journal.

PODIATRY AND THE NATIONAL FORMULARY

Harry L. Hoffman, Canadian Pod. J., 3:5-7, July 1958.

Dr. Hoffman presents a very concise and informative explanation of the organizations responsible for the U.S.P. and the N.F. (National Formulary), and the mechanics employed in their revision which is helpful in understanding some of the differences between the two books.

Dr. Hoffman, who is the Chairman of the Council on Podiatry, Therapeutics and Pharmacy, is also a member of the Medical Science Group of the National Formulary Advisory Panel. In this capacity he serves as liaison between the National Association and the National Formulary. As you are all probably aware, we have a Podiatry-Chiropody section in the current N.F. X. Dr. Hoffman says this is only a start as we expect to have a much larger and informative and useful section of the eleventh edition of the N.F.

GESUNDE FÜSSE IM WARMEN SOMMER

Von Dr. W. Schw, Der Fusspraktiker, 99-101, July 1957.

The article discusses the necessary hygienic care of the feet during the summer. The author relates the bad effects of too much perspiration on the skin; effects of going barefooted in green meadows, over sand, and on the sea coast; the use of contrast bathing of the feet; and the infection and injury resulting from too much hyperhydrosis.

CASTING OF TOE FOR LATEX SHIELD WITHOUT SEPARATING MEDIA

G. Solomon, Footprints of Florida Chiropody Ass'n., 1.6, July 1958.

Dr. Solomon presents an improved technique for the making of negative and positive castings of a toe for latex shielding in which no separating media is necessary. The materials required are available at any dental supply. For the negative impression JELTRATE (L. D. Chaulk & Co.) is used. The positive cast is made with ALBASTONE (S. S. White Dental Mfg. Co.). Dr. Solomon has found it more practical to make the impression with the original lesion. This permits a more accurate guide for build-ups.

The technique as described by Dr. Solomon shows rapidity and ease of construction. No separating media is necessary. There is an elimination of the breaking of small parts of the toe cast. And, there is an accuracy of the resultant impression and positive cast.

SURGICAL EXCISION OF CHRONIC NON-SPECIFIC SINUS TRACTS

A. J. Mazzaglia, Canadian Pod. J., 3:2-3, July 1958.

After proper sedation and aseptic technique the area of the first and second toes was anesthetized with Xylocaine 2% and epinephrine 1:100,000. The two anterior sulcal openings were included in elliptical incisions and these were made to join proximally as a lineal incision which extended from the junction of the posterior and middle one-third of first metatarsal interspace. The overlying skin and subcutane-

ous tissue was dissected free with sistrunk-scissors. The large-bored sinus tracts were freed by sistrunk dissection. Two were found lying parallel in the first interspace and the third was underlying the first proximal phalanx, running toward the tibial side of the hallux. The three sinus tracts were removed in toto and sent to the pathologist for microscopic examination and identification. The diagnosis derived from the pathologist's report was nonspecific chronically inflamed sinus tracts of skin and subcutis.

FORMALDEHYDE AND VITAMIN A IN TREATMENT OF VERRUCAE

Murray Levey, Current Chiropody, 7:14, July 1958.

During the past three years Levey has combined formaldehyde soaks and the oral administration of Vitamin A capsules in selected wart cases. These patients were children or adults who had previous treatment, had fear of wart treatment, or they could not return frequently to the office for other therapy. Levey states the results have been gratifying. The solution of formaldehyde 3% is used as a dehydrating agent and the Vitamin A (25,000 or 50,000 units d. i. t.) to bring normalcy to the skin.

The procedure of treatment is outlined by Dr. Levey.

ROLE OF VITAMIN B_{12} IN PERIPHERAL NEUROPATHIES

Allen Feigenbaum, Current Chiropody, 6:7-8, June 1958.

Dr. Feigenbaum presents an understanding of the action of Vitamin B_{12} upon the neurological manifestations of the feet. Vitamin B_{12} is necessary for the utilization and synthesis, and metabolism of labile methyl groups. Vitamin B_{12} plus labile methyl groups must be available to form choline, which will form an integral part of phospholipid. Phospholipids must be formed to transport insoluble fatty acids to the liver for oxidation processes and then to nerve tissue. Peripheral neuropathy always exhibits three signs: pain, motor changes, and objective sensory change. When a nerve fiber degenerates, irrespective of etiology, the myelin sheath always breaks into fat droplets and lecithin. Since sensory or motor findings cannot exist alone in a true neuropathy, a common tissue to both (myelin sheath), must be the cause of the pathology. Therefore, an hypovitaminosis of Vitamin B_{12} means an insufficient quantity of methyl groups will be utilized by the human body. As a result phospholipids and their precursor, choline, will be lacking. Lipids will not be deposited in the myelin sheath and a peripheral neuropathy results.

PLANNING IN CHIROPODIAL THERAPEUTICS

S. Pitts, Chiropody Review, 7:14-17, July 1958 (London).

The secret of any success lies in the formation of a plan, without which no science, art or craft can produce sound results.

Planning is the very essence of medical treatment, and is equally unavoidable in chiropodial therapy. Chiropodial therapy consists of five distinct phases, each of which must be used in co-ordination with the rest. The phases or stages are: Reception, Examination, Diagnosis, Treatment, and Advice. Dr. Pitts describes and fully discusses each of the phases or stages in his approach to therapy.

GESCHWOLLENE FÜSSE UND BEINE

Von Dr. W. Sch., Der Fusspraktiker, 166-168, Nov. 1957 (Hamburg, Germany).

The author presents a discussion of foot and leg cramps, paresthesias of the feet, and the process of edema.

BOOK REVIEW

FOOT TROUBLES

T. T. Stamm, F.R.C.S., Illustrated with diagrams and photographs, Philosophical Library, Inc., 15 East 40th Street, New York 16, N. Y., Price $4.75, 122 pages, 1957.

This concise presentation of "Foot Troubles" adequately serves as reference for those who are in need of information on this vital subject. It stresses the mechanism of the healthy foot and its muscles, with emphasis on its practical application with modern treatment and preventative measures for all the common foot disorders and some lesser known ones.

The author's clarity of expression and talent for foot troubles render this subject intelligible to all, particularly the layman. The author has accomplished his purpose by bringing together in a small volume the extensive foot troubles relating to individual reactions of foot conditions in common usage today.

The ten chapters in the book cover such subjects as the foot, control of posture, mechanics of the foot, flatfoot and foot strain, hallux valgus and hallux rigidus, minor foot troubles 1 and 2, diagnosis of foot pains in the metatarsal heads, in the long arch and in the heel, care of children's feet, footwear, foot exercises and other conditions affecting the foot, such as circulatory conditions, varicose veins, diabetes, arthritis and gout.

"Foot Troubles" is filled with many illustrations that show the foot as a lever, as a pedestal, the unbalanced foot, effects of bowlegs and knock knees, action of the muscle controlling movement of the toes, and ineffective heel wedge, correct and incorrect heel wedges, a "floated out" heel and use of board for carrying out exercises for toe function. The plates show the supinated forefoot, claw toes and pes cavus before and after surgical correction, the gradual development of hallux valgus, hallux valgus before and after surgical correction, hammer toe, elevated fifth toe before and after correction, various outer toes, strapping for a sprained ankle, foot inspection, foot exercises and exercise for toe function.

The book, in the writer's opinion, is written mainly for the layman and holds one's interest throughout. It stresses the importance of avoiding self diagnosis and treatment, a tendency which is unfortunately too common in the usual home today. The book is recommended for the mature adult who wishes to get up-to-date information on foot troubles and conditions. It is a good book for the waiting room.

Jack Ranzer, Pod.D.

"All sciences find illumination and coordination by using evolution as a master key or source science, thus explaining much that is obscure."

Herman Scheimberg
Chiropody Record November 1951

DIGESTS FROM THE LITERATURE

Anyone wishing to read the complete article, if not available in your local library, may borrow it through interlibrary loan. A microfilm may be borrowed from the National Medical Library, Washington 25, D. C., or a photo-duplication may be obtained from that library.

CIRCULATORY DISEASES

Widespread and Sudden Occlusion of the Small Arteries of the Hands and Feet, R. P. Jepson. Circulation 14: 1084-89, 1956.

Cases of digital gangrene or profound cyanosis occurring in two or more limbs of 11 patients were observed for periods up to 15 years after the initial attack. There was no evidence of systemic disease, although some patients had an associated pyrexia. The lesion caused a thrombotic occlusion of the digital or similar sized arteries, probably secondary to a prolonged digital and more proximal spasm. Except in one case, the single nonrecurrent episode reached its maximal clinical severity early in its course. Although the extremities appeared to have a severe ischemia that would be followed by gangrene, this did not happen. The collateral circulation was rapidly established with recovery of the deeply cyanosed digital skin. If a limited gangrene did appear it was of the dry type.

Traumatic Arteriovenous Aneurysm of the Foot, H. M. Broder and J. H. Caughran. J. Bone & Joint Surg. 39-A: 427-30, 1957.

A patient falling from the loading elevator of a bomber and landing about 25 feet below on his right foot on the concrete runway had an arteriovenous aneurysm of the medial plantar vessels complicating a combined fracture of the outer aspect of the calcaneus and the tip of the lateral malleolus. There was no penetrating wound nor bone spicules. Immobilization in a plaster cast, elevation of the foot, and application of ice packs were followed two weeks later by the appearance of a pulsating mass 2 inches in diameter, located inferior to the medial malleolus. The aneurysm and its vessels of entry and exit were isolated. The vessels entering the sac were an enlarged medial plantar vein, a short stout trunk from the medial plantar artery, and the medial malleolar branches of the medial plantar artery and vein. The sac was removed and a plaster boot applied. The patient recovered in four months. The probable diagnosis was a temporary eversion type of subluxation of the foot which may have torn the involved vessels—a hypothesis supported by the presence of a shearing-type fracture of the outer aspect of the calcaneus combined with comminution of the tip of the lateral malleolus. In such a case surgery is preferably deferred for two to three months unless circulatory embarrassment, because of an enlarging hematoma, threatens to slow the development of an adequate collateral circulation. Meanwhile the lesion should be studied by arteriograms. Excellent results may be expected following ligation and excision.

Popliteal Vein Ligation in Treatment of the Lower Limb Stasis Syndrome, T. O. Murphy et al. Arch Surg. 74: 105-11, 1957.

Between 1949-1953 popliteal vein ligations were performed in 63 patients; 9 had bilateral ligations. These patients were followed up from 3 to 6 years. Symptoms had endured for periods of 3 to 36 years before operation. Many had undergone a number of operations. The greater saphenous vein was incompetent in 46 per cent of cases. A stasis ulceration was pres-

ent in 63 extremities; all were healed previous to ligation. Conservative management consisted of good foot hygiene, adequate support to the leg, elevation of the foot of the bed, bed rest in severe cases, and skin grafting at ulcer sites. Popliteal vein ligation was indicated when the lower limb stasis syndrome was present and not kept under adequate control by conservative measures and evidence of popliteal vein incompetency was indicated by retrograde phlebotographic study. The operation was helpful in 42 per cent of the extremities and brought no relief in 58 per cent. Within one year there was 50 per cent recurrence, but 9 of these 36 were healed and maintained with conservative management. It is suggested that more accurate evaluation of popliteal vein incompetency is needed in choice of patients to be submitted to this procedure.

DERMATOLOGY AND ALLERGY

Infections of the Foot, H. Bailey. J. Internat. Coll. Surgeons 27: 475-82, 1957.

Treatments for various types of infection of the foot are discussed; antibiotic therapy is important, and when possible should conform with bacteriologic sensitivity tests of the organisms. The infections included are infected blister; paronychia particularly of the great toe; infected adventitious bursa, usually the result of improper treatment of a corn; terminal pulp space infection, uncommon in the foot and then occurring in the great toe; suppurative tenosynovitis of a toe, which is also rare; infection of the superficial fascial spaces of the sole; interdigital subcutaneous spaces, an infection occurring commonly in those who walk barefooted; infection of the heel space, of the web spaces, of the deep fascial spaces of the sole, of the lateral plantar space, and the medial plantar space, together with their complications; and infections of the dorsum of the foot. Diagnosis and treatment with drainage are outlined for each type of infection.

Trichophyton Rubrum Infection in Families, M. P. English. Brit. M. J. 1: 744-46, 1957.

The early symptom of this infection is a scaling and maceration between the toes which resemble tinea pedis due to other fungi; it is much more likely to attack the nails, causing them to be discolored, misshapen and broken. It is rarely recognized as an epidemic disease. The members of the households of 19 patients with T. rubrum infection were observed, and of 48 contacts 13 (27%) were found infected. Skin scrapings were made of all who showed clinical symptoms. In 9 of the 19 families more than one person were infected. Signs of the disease appeared in 1 to 15 years after exposure; 8 (aged 14 to 35) had been exposed during childhood. Conjugal infection occurred in 4 of 15 couples studied. Initial infection occurred in the feet in 25 persons (78%); in 4 only the fingernails were infected; in 15 only the toenails; in 6 both finger and toenails were infected. Groin infections were found in 7 persons. Since this infection is intractable to treatment, it is important to prevent spread of the disease. Precautions consist of prevention of shedding of infected particles where others may come in contact with them; avoidance of walking barefooted and exchanging of shoes or using a common bathmat. Sterilizing of footwear or floors is impracticable.

Athlete's Foot (Editorial). Brit. M. J. 1: 755-56, 1957.

Athlete's foot is the most common superficial mycotic disease in Great Britain. Years of attempt to isolate by culture pathogenic fungi from supposedly contaminated surfaces of bathing premises have afforded little positive evidence to support the belief that the infection was spread by infected epithelial debris. American writers discount the role of this debris in the cause of epidemiology of the disease, believing

that the pathologic fungi are in a dormant or slight activity state in apparently normal skin, and that infection requires some biochemical alteration of the skin, or "factor X." Recently evidence has been accumulating that infective material is present in shower baths. In Great Britain the opinion is held that the patient should be warned that he may infect others and that going barefooted at bath and other places can spread the infection. But it is still not known why a small number of individuals exposed to such contamination become infected, or what leads to the onset of clinical symptoms.

Preventive measures include wearing of shoes or sandals while bathing at communal baths, and washing the feet thoroughly on returning home, and discouraging infected persons from attending bathing premises. In the home towels, bathmats, nail-brushes, sponges, face cloths and soap should be kept separate for the infected individual. He should wear cotton socks in bed and wash and boil them frequently. He should be told to seek a doctor early as the infection may spread to the hands and groin, as well as infect other members of the family. Efficient methods should be prescribed to prevent spread of the infection.

Deep-Seated Pustular Trichophyton Rubrum, J. F. Mullin and F. L. Watts. Arch. Derm. 75: 543-46, 1957.

A case of this disease is reported in a 43-year-old woman with dark complexion, who had erythematous, scaly, pruritic dermatitis of the lower legs and buttocks. Finger and toenails showed dystrophic changes that were not characteristic of onychomycosis. Incision of three bluish tumefactions on the posterior aspect of the left leg produced greenish pus. The organisms present were sensitive to Verdefam solution but no systemic fungicide proved effective. The patient was given nystatin 4,000,000 units per day with no improvement after 70 days. Large doses of potassium iodide controlled the deep pustular lesions, but they recurred when the treatment was discontinued. No other report of such a case was found.

DIAGNOSIS

Permissible Dose Problems with Special Reference to Diagnostic Procedures, M. N. Poppel, H. G. Jacobson et al. Am. J. Roentg. 77: 138-43, 1957.

Adoption of a personal diary is suggested that will give a ready exactness regarding the composition of radiation given to an individual in order to avoid supratolerable levels. The tolerance dose of man is variously estimated by different writers. A radiologist because of poor judgment may cause a patient to be over-irradiated, or successive examinations may cause accumulated effect if the full history of previous exposures is unknown or disregarded. Some patients may have had excessive fluoroscopy or over-irradiation of growing epiphyses, psoriasis, plantar warts or fungus disease. Individuals handling radioactive material may have an excessive accumulative effect. Such persons usually wear film badges, pocket chambers, direct reading dosimeters, or other motoring devices. The significant incidence of leukemia in radiologists has been recognized in comparison with physicians not using x-rays, also in comparison with the general public. The author has devised a method of entering the date and type of examinations and areas covered. Methods for recording radiation doses received by radiologic staff members are also described.

DRUG THERAPY

Boric Acid Poisoning, J. W. Jordon. Arch. Derm. 75: 700-28, 1957.

Review of the literature shows numerous cases where death was due to use of boric acid: mixed with a baby's formula, used

in gastric lavage, rectal enema, bladder irrigation, subcutaneous clyses, vaginal packs, or used in surgical wounds, burns, ulcerations and skin eruptions. This acid is potent when given in sufficient amounts to be absorbed into the blood stream. A case is reported in a woman who had a rash on the left ankle which spread after an application of an ointment containing ethyl amino-benzoate. Continuous dressings of a saturated solution of boric acid were applied for about 14 days, when the patient was able to be up and around, but she soon became lethargic and 24 hours before she was taken to the hospital she became comatose; she died 14 hours later. In this case the skin condition became worse instead of improving, thereby enhancing absorption of the boric acid. The author believes that boric acid has no place in medical therapy. There are many better and safer antiseptics. If it is used in treatment of skin conditions it should not be employed over large body areas, nor should this treatment be prolonged.

Zoxazolamine in Geriatric Muscle Spasm, E. Settle. Amer. Practitioner 8: 443-45, 1957.

Of 46 patients, aged 48 to 87, all had voluntary muscle spasm and pain associated with various acute and chronic disease entities—neurologic, orthopedic, or arthritic. Following administration of zoxazolamine signs of toxicity occurred in 19 per cent of the patients, but only in 6 per cent was serious enough to require withdrawal of the drug. Nausea in 2 patients was relieved by chlorpromine therapy. Zoxazolamine was given three to four times a day in oral doses of 500 mg. and reduced to 250 mg. after improvement or when side-effects were observed. The drug was most effective in cases of spasticity at a segmental level, and much less valuable in cases wherein the pathology was supra-segmental (cortical or subcortical). Five patients having multiple sclerosis had diminished painful spasticity after one to three weeks of treatment with 500 mg. dosage; spasm returned when the drug was withdrawn. Only 2 of 7 patients with painful contracture spasms of the affected limbs had some relief of pain and spasm. Of 13 with suprasegmental neurologic lesions and manifestations of skeletal muscle spasm, only 4 showed improvement. Results were better in 18 patients with striated muscle spasm in various orthopedic disorders. Four of 7 patients with acute torticollis were relieved in 2 to 4 days; 1 of them developed a severe giant urticaria which responded to prednisone therapy. Nine of 10 patients with chronic spondylitis and osteoarthritis showed moderate to marked reduction of spasms and improvement to general function.

MUSCULOSKELETAL SYSTEM

Treatment of Ankle Injuries, E. F. Cave. GP 15: 94-100, 1957.

If ankle injuries are not properly supported for an adequate period the ligaments may not heal and recurring sprains become frequent. Ankle fractures not accurately reduced or protected sufficiently long may cause disalignment of the joint, widening of the mortice, trauma to the articular surfaces, and ligamentous relaxation characterized by pain, swelling and deformity. Diagnosis and treatment of ligamentous injuries are discussed, including injuries to the external and internal (deltoid) collateral ligaments; to the tibiofibular ligament, and to the tendon Achilles. The epiphyseal injuries are also discussed, including injury to the lower tibial epiphysis and epiphyseal separation of the lower fibula. Diagnosis and therapy of other fractures include those of the lower end of the fibula, of the internal malleolus, of both malleoli, tri-malleolar fracture with or without dislocation of the astragalus, bursting fracture of the lower end of the

tibia, and fracture of the tarsus associated with dislocation. Since the ankle is weight supporting, accurate repositioning of displacing fractures is necessary. Epiphyseal injuries not infrequently lead to growth disturbances and deformity of the ankle, making surgical correction necessary.

Fracture-Dislocation of the Talus with Posterior Displacement of the Body and Avascular Necrosis, I. W. Davidson and W. J. McCracken. J. Internat. Coll. Surg. 27: 491-96, 1957.

Seventeen cases of this rare injury are reviewed to consider new treatment and management of this dislocation and its complications. In 10 cases accurate reduction of the fractured neck of the talus was accomplished without development of avascular necrosis. The authors feel that avascular necrosis associated with injury of the talus is not caused by any disorder of the blood supply to the talus. The incidence of necrosis is directly proportional to the extent of bone damage, its ligamentous and capsular attachments and their blood supply. The injury may be complicated by (1) sloughing of the skin over the displaced bone, causing infection or osteomyelitis; (2) difficulty in replacing the displaced body of the talus in the tibiofibular mortise; (3) fracture of the anterior margin of the medial malleolus; (4) inevitable avascular necrosis; (5) later degenerative arthritic changes in the subtaloid and ankle joints. Reduction is urgent and must be accurate. Once the fracture is reduced, immobilization is necessary until there is x-ray evidence of bony union, with a narrow zone of revascularization beyond the fracture line. In some cases in this series arthritis of the subastragaloid joint developed later and required a subastragaloid fusion, but the ankle joint remained mobile. In cases where excision of the talus is necessary it should be combined with tibial calcaneal fusion.

Fracture about the Ankle Joint with Fixed Displacement of the Proximal Fragment of the Fistula behind the Tibia, M. H. Meyers. J. Bone & Jt. Surg. 13-A: 441-44, 1957.

In the two cases reported of this type of fracture, open reduction of the fractures was successful. One of these patients had a trimalleolar fracture with displacement of the posterior marginal fragment. The proximal fibular fragment was not caught on the posterior ridge of the tibia, but was fixed in the fracture site of the posterior lip of the tibia. The other patient had a compression fracture of the distal end of the tibia together with fracture of the lateral malleolus. Such a situation should be considered when fracture of the ankle involving the fibula cannot be reduced by closed methods.

Fractures Involving the Distal Epiphysis of the Tibia and Fibula in Children, E. W. Johnson and J. C. Fahl. Amer. J. Surg. 93: 778-81, 1957.

These fractures are of four principal types: (1) those occurring in abduction, (2) those occurring in plantar flexion, (3) those occurring in adduction, and (4) those occurring in fibular epiphyses only. Of the 27 cases discussed in children, application of a cast was all that was necessary in 9 having no significant separation of the fragments. In 16 cases successful anatomic reduction was accomplished by closed manipulation. In 2 cases in which this method did not accomplish reduction, operative repair was required. In one of these cases a stainless steel screw was inserted through the fragment across the epiphyseal line; on removal five weeks later the results were excellent. In the second case in which the anterior tibial tendon and a segment of the periosteum were interposed between the displaced epiphysis and the shaft of the tibia, reduction held with two Collison screws gave very good results.

Follow-up of these patients showed no deformity or irregular growth of the involved epiphysis in 12; results were unsatisfactory in 3, in 2 of them because of shortening (about 1½ inches) as compared with the other leg; in one because of cosmetic changes. Accurate reduction of the epiphysis is required; repeated manipulations or open reduction are rarely necessary. A minimal degree of deformity is preferable to subjecting the extremity to considerable closed or open manipulation.

Lesion of Morton's Metatarsalgia (Morton's Toe), T. M. Scotti. Arch. Path. 63: 91-102, 1957.

Seventeen patients, only one with a bilateral lesion, had symptoms enduring for a few weeks to 10 years. In most instances the pain was at a point between the heads of the third and fourth metatarsals, was particularly severe when walking, and was relieved by removal of the shoe. Usually there was tenderness over the affected site. Neurectomy in all cases was performed, followed in some cases by use of arch supports or special shoes. In most cases the fourth plantar digital nerve was involved. The initiating cause of the disorder is thought to be trauma from weight bearing and from wearing high-heeled or ill-fitting shoes.

Metatarsus Primus Varus and Hallux Valgus, D. C. Durman. Arch. Surg. 74: 128-35, 1957.

From a study of 356 normal feet it was concluded that the ideal normal foot is one in which the first and second metatarsals are parallel, and the great toe extends directly forward in the long axis of the first metatarsal. The average normal foot has a metatarsophalangeal angle of about 20 degrees and an intermetatarsal angle of about 10 degrees. None of the subjects having a hallux valgus foot had an intermetatarsal angle of less than 10 to 16 degrees and metatarsophalangeal angles ranged from 22 to 56 degrees. In another group studied cuneiform deformity was present in 45 per cent of the subjects with hallux valgus. In more than 50 per cent hallux valgus was secondary to a congenital malformation of the first cuneiform bone which leads to or is concomitant with metatarsus primus varus. Hallux valgus in the growing toe is increased by dynamic intrinsic or extrinsic forces applied to the great toe. A modified Peabody method is described in treatment of these cases. The first metatarsal is not shortened by this operation; if it is already short, it can be lengthened by using a larger graft. Full weight bearing in a cut-out shoe with sponge rubber longitudinal and metatarsal inlays is permitted in three weeks. These inlays should be fitted by a surgeon. Results were satisfactory in all these patients except one who required a second operation.

Assessment of Mobility in Joints, P. O. Williams. Rheumatism 13: 13-16, 1957.

Accurate recording of the range of movements of an affected joint is necessary in determining the efficacy of a treatment. A pain-free joint although limited in movement is usually greatly superior functionally to the joint with a full range of painful movement. Elimination of pain in a joint allows a great increase in range. The chief causes of loss of movement must be recognized before treatment is planned: pain, swelling, muscle spasm, fibrosis or contraction of capsule, muscle shortening, or ankylosis. Methods of assessing mobility are described for each joint. Toe and foot movements cannot be measured accurately.

NEW GROWTHS

Aneurysmal Bone Cyst of a Metatarsal, R. J. Booher. J. Bone & Joint Surg. 39-A: 435-40, 1957.

A rare case of aneurysmal bone cyst in a metatarsal bone is reported in a girl of 12

years. During seven months growth of the mass was rapid as shown by x-ray studies. Biopsy study suggested an aneurysmal bone cyst. Operation was decided upon because pathologic examination might reveal a giant-cell tumor, with danger of recurrence after removal. Roentgen therapy in so young a child could not be considered even if the tumor proved to be of giant-cell type. The mass was found entirely within the expanded cortical shell, with no part of the process in contact with the soft tissues. The lesion being so large with only the base of the bone preserved, the entire bone was resected. The patient was discharged on the eleventh postoperative day, walking on crutches; seven months later she had entirely recovered.

ONYCHOLOGY

A Note on Long Curved Nails, C. W. Gray and W. B. Bean. Arch. Derm. 75: 126-28, 1957.

A case is reported in which a woman neglected to trim her toenails for a period of 12 years. While her father lived, he had trimmed them. At the time she was examined she had been a diabetic for 3 years and had suffered several episodes of diabetic coma. Her diabetes was uncontrolled; she ate little, had a severe weight loss and smoked and drank heavily. Her toenails grew to great length until at intervals of three to four months they broke off. The nails of the first and second toes were very heavy and curled to form arcs, as molded by the shoes. It is suggested that cases such as this one are due simply to neglect, and that patients with this deformity should be studied as to emotional, intellectual and social background.

RHEUMATIC DISEASES

Gout, J. H. Talbott. DM, pp. 1-39, March 1957.

Gout is described at length in this monograph, its heredity, incidence, etiology, pathogenesis, clinical features, diagnosis, complications, treatment and prognosis. If properly treated, acute symptoms will subside and complete restoration of function is possible. A prophylactic regimen of colchicine and Benemid has been found highly successful. The mildly afflicted require only a few milligrams of colchicine per month; the moderately afflicted require 0.5 to 1 mg. daily, and the severely afflicted should take the drug up to tolerance. Benemid and colchicine combined give maximal effect. Benemid alone is only partially effective. It is given in doses of 1.5 to 2 Gm. daily in severe cases and 1 Gm. daily in moderate cases, together with an abundant intake of fluid to prevent precipitation of urates in the renal tubules. The pharmacologic effects of Benemid are excretion of uric acid in the urine and decreased concentration of uric acid in the serum. Maximal change occurs shortly after initial treatment, and tends to be maintained year by year if Benemid is injected daily. Benemid also decreases the size of subcutaneous tophi unless they are too large. In that case they require surgical excision.

Patients with severe gout are advised to take Benemid indefinitely; those with mild attacks may be taken off Benemid for varying periods. Most patients should take modest quantities of both Benemid and colchicine regularly. A high fluid intake is imperative. When taking Benemid the minimal output should be approximately two liters daily. Tea and coffee are not restricted and alcohol may be used moderately. A low-protein and low-purine diet has been overemphasized. Proteins seem no worse precursors of uric acid than sugars and fats; all contribute to uric acid molecules. Only foods high in purines (liver, kidney, sweetbreads, anchovies) should be restricted; a diet balanced in content of fats, proteins and carbohydrates is desirable. A normal weight should be maintained. Phenylbutazone is not specific for gout, but

used with colchicine is effective as an anti-inflammatory and analgesic drug. About 2 to 3 mg. of colchicine taken together with 800 mg. phenylbutazone during the first 12 hours, and the same 48 hours later are recommended. If used for short periods phenylbutazone has no toxic effects. The steroids are less effective.

Proposed Diagnostic Criteria for Rheumatoid Arthritis, W. M. Ropes, G. A. Bennett, et al. Ann. Rheum. Dis. 16: 118-25, 1957.

A Committee of the American Rheumatism Association collected data from a number of physicians in the United States and Canada, each of whom answered a set of questions regarding five of their patients having definite rheumatoid arthritis, five probable cases and five without definite symptoms but possibly rheumatic: (332 cases from 19 different cities). Certain manifestations were eliminated as not specific of the disease. The criteria adopted for definite rheumatoid arthritis required five of 11 types of symptoms which had endured for at least six weeks. Very briefly, these consisted of morning stiffness; pain on motion; swelling of a joint; symmetrical bilateral joint swelling; subcutaneous nodules; typical x-ray evidence in involved joints; positive sheep cell or streptococcal agglutination tests; poor mucin precipitation from synovial fluid; characteristic histologic changes in synovial member; characteristic histologic changes in nodules showing particular cell formation. The probable rheumatoid arthritic patient has any three of the above characteristics. The possible rheumatic patient has any two of six symptoms, including morning stiffness, pain on motion, joint swelling, subcutaneous nodules, elevated erythrocyte sedimentation, and iritis.

Excluded from such criteria were symptoms of certain diseases such as those of disseminated lupus erythematosus, periarteritis nodosa, scleroderma, rheumatic fever and gout tophi, infectious arthritis, tubercle bacilli in joints, Reiter's syndrome, hypertrophic pulmonary osteoarthropathy, neuroarthropathysarcoid symptoms, multiple myoma, erythema nodosum and leukemia or lymphoma.

SURGERY

Results and Technique of Stripping Operation for Varicose Veins, T. T. Myers. J.A.M.A. 163: 87-92, 1957.

Of 1,189 stripping operations performed, 1,080 were on the great saphenous vein and 109 on the small saphenous vein. Complete stripping from foot to groin of the great saphenous vein produced 94 per cent excellent or good results, 5 per cent fair and 1 per cent poor results. Complete stripping of the small saphenous vein brought 95 per cent excellent or good results. Partial stripping (to the knee) of the great saphenous vein brought much poorer results. Postoperative complications in the total group were thrombophlebitis in 0.3 per cent and pulmonary embolism in 0.2 per cent. One death (from pulmonary embolism) occurred in the 9-year period. The operative techniques are described, together with postoperative care. Recurrent varicosities required 510 surgical operations; this was due to various causes: inadequate tying at the groin or not tying at all; the accessory saphenous vein was undisturbed; the ligation was too low, leaving the tributaries at the saphenofemoral junction; stripping was inadequate, or the perforating veins were not handled properly.

Veins not too tortuous can be removed by passing a stripper through from a proximal to a distal incision, or the reverse; or the stripper can be passed in both directions. If veins are too tortuous for this procedure, they can be removed by dissection or evulsion. The great saphenous

vein if involved is ligated flush with the femoral vein at their junction, and dissected together with all other veins coming into the femoral vein laterally and medially. If bleeding does not stop, packing of the channel and ligation or removal of these tributaries may be required.

Seven Short Cuts in Office Surgery, George Crile, Jr. Postgrad. Med. 21: 124-26, 1957.

The following seven short cuts may be of interest: (1) Nonspecific sinuses and fistulas are treated by injection of an iodized oil. (2) Sutures if nonabsorbable may cause a sinus; should be removed with a tiny crochet hook. (3) For needle biopsy use a Vim Silverman needle to obtain tissue for examination, but do no biopsy if tumor seems operable. (4) Ingrown toe nail: Unless surgery is required, nail clippers are used to cut out the medial part of the ingrowing nail. (5) Seborrheic keratosis: Lightly cauterize and wipe off with gauze; incision and suturing is avoided. (6) Wens: Moisten with 70 per cent alcohol or colorless disinfectant. Inject procaine hydrochloride and minimize bleeding by having an assistant press finger tips on each side of the wen. Incise in center and squeeze out contents; pop out sac or pull out with hemostats. Suturing not necessary. (7) Paronychia: Pick with stylet at the hard insensitive cuticle of the hangnail until it is incised and a drop of pus appears. For drainage apply a 2 cm. long small rubber band and fasten with adhesive tape. A large dressing is applied which patient is to keep moist for 48 hours, then remove.

MISCELLANEOUS

Inexpensive and Comfortable Conductive Shoes, C. L. Landmesser. Anesthesiology 18: 337-39, 1957.

The National Fire Protection Association recommends that all operation personnel be in electrical contact with the conductive floor of the operating room. Various specially devised footwear and other protective devices have proved expensive, uncomfortable, a nuisance to apply, and impermanent. The usual leather-soled shoes fail to pass the test for conductivity, even though they are made protective by soaking the soles in saline solution until thoroughly damp; the next day when taken from the locker they will not be adequately conductive.

A device is described which will inexpensively and adequately provide perfect conductivity and require only slight alteration in the brace shop. Two conductive rubber domes are cut from conductive rubber one inch in diameter and attached to each sole with one countersunk copper rivet for each dome, with a conductive insole cemented over each rivet head. These conductive rubber domes are placed abreast of each other behind the contact area of the sole, similar to the attachment of a metatarsal bar. They make firm contact with the floor and relieve weight on the metatarsal arch. While safety is provided upon conductive floors, on grid floors the domes may not be in contact constantly with the grids and therefore do not serve their purpose. For this reason conductive footwear should be tested every time they are worn.

Retention of Ethylene Oxide Fumigant by Shoes, H. C. Beard and R. B. Dunmire. Arch. Indust. Health 15: 167-69, 1957.

A new unused shoe and a well-worn shoe were tested for retention of ethylene oxide by use of C^{14}-labeled compound. Different parts of the shoes were included, such as tongue, heel and insole, which are specially important as they are in direct contact with the foot. The rough side of the tongue, next to the foot, retains much more of the ethylene oxide than the smooth side. The study showed that leather impregnated with dirt retains less ethylene oxide than new leather. But soft old leather retains more than the same kind of leather in a new shoe. Soft pliable leather like tongue and insole picks up and retains

ethylene oxide readily, and seams back of shoes absorb large amounts, and other seams also, trapping the oxide. Spongy soft unfinished sides of leather retain more than smooth sides.

Nature of Man's Adaptation to His Total Environment and the Relation of This to Illness, L. E. Hinkle and H. G. Wolfe. Arch. Int. Med. 99: 442-60, 1957.

Marked differences in susceptibility occur among individuals of the general population; these differences are related to certain factors which operate similarly in all of these groups. Individuals having the greater number of illnesses have a wide variety of major and minor illnesses involving various bodily systems. Those who had many illnesses involving one particular bodily system, usually had other illnesses, some serious, involving other systems. Also, those with a great number of minor sicknesses had a number of major illnesses usually involving the same bodily systems as the minor illnesses.

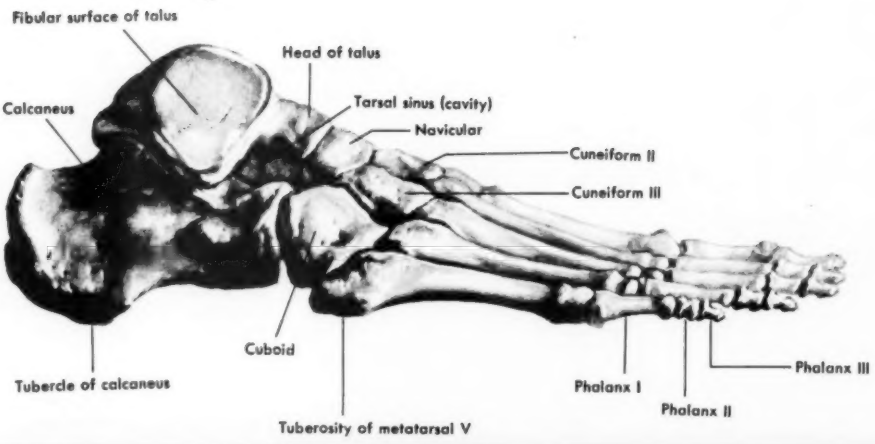
Those who had a great number of bodily illnesses, whatever the type or cause, experienced many disturbances of thought, mood and behavior. That is, there was a parallelism between bodily illness and neuroses. The conclusion drawn is that "illness" is a state of the total organism, so that a variety of syndromes appear concurrently or consecutively. The differences in the amount of illnesses experienced depends upon the constitutional differences in susceptibility to disease, and in the subject's adaptation to his social environment. Symptoms of anxiety, tension, depression and asthenia account for the majority of symptomatic complaints. Illnesses occur in clusters, each cluster occurring during a period of adaptive effort. A variety of illnesses occurring concurrently or consecutively may involve microorganisms, toxic materials, physical trauma, dietary disturbance, or other causative agents. Man's relation to his social environment has little influence upon the form the sickness will take, but has a major influence upon the time and situation in which the illness will occur and the course it will pursue.

Prevalence of Disabilities Among Government Employees, A. Tish. Arch. Indust. Health 15: 160-66, 1957.

This second 8-year study of disabilities among government employees shows few changes over those of an earlier report in regard to the frequency of disabilities. From 1948 to 1955, of the total 54,462 disability annuitants 45 per cent were retired because of cardiovascular disabilities, 19 per cent for disorders of the nervous system. Of the nervous disabilities, 43 per cent were psychoneurosis and 16 per cent schizophrenia. There was a marked decrease in the frequency of syphilis, which was considered due to massive penicillin doses in treatment. Multiple sclerosis decreased from 4.2 per cent to 2.7 per cent, probably because of earlier diagnosis and therapy. Spinal cord disease had considerable increase, possibly due to the increasing number of automobile accidents. Cancer climbed from 3.0 to 4.5 per cent, particularly increasing in cases of the respiratory system, which were one-fifth of the total cases of cancer.

"Perseverance is a great element of success. If you only knock long enough and loud enough at the gate, you are sure to wake up somebody.

—Longfellow



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Doctor of Surgical Chiropody

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If you have a scientific bent and are interested in the heal
consider the profession of Podiatry-Chiropody. This is the
treating diseases, injuries and defects of the foot.

WHY PODIATRISTS-CHIROPODISTS ARE NEEDED

About 130,000,000 Americans have suffered at one time o
of foot ailment, and foot problems have cost American indu
year. So you can well understand the importance of this p

Indeed, the American Podiatry Association estimates that
specialists will be needed by 1965. Foot health has becon
living as general medical and dental health.

EARNINGS, HOURS AND SATISFACTIONS

Because he is in such great demand, the podiatrist-chiropod
tion and high income. There are really no limits to his pote
fession as a whole averages $9,000 per year — well above
age. Some foot specialists earn as much as $40,000 per ye
large extent, of course, on one's skill and energy.

Fortunately, in this profession — unlike some of the other
the hours are ideal. If the podiatrist-chiropodist has a priva
works from 9 a.m. to 5 p.m. five days a week. Sometimes h
two evenings a week, but rarely is he called out at nights.

It requires a lot of serious think-
hat you aim to get out of life.
he healing arts, you'll do well to
is the branch of medical practice

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time or another from some form
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this profession.

s that an additional 3,000 foot
become as essential to modern

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ghts.

COLLEGES OF PODIATRY-CHIROPODY

All the colleges listed below are approved by the Council of Education of the American Podiatry Association. For more detailed information, write to any of the schools for catalogues.

California College of Chiropody
1770 Eddy Street, San Francisco, Calif.

Chicago College of Chiropody
1422 West Monroe St., Chicago, Ill.

Illinois College of Chiropody
and Foot Surgery
1327 North Clark St., Chicago, Ill.

Maurice J. Lewi College of Podiatry
55 East 124th St., New York, N. Y.

Ohio College of Chiropody
2057 Cornell Road, Cleveland, Ohio

Temple University, School of Chiropody
1810 Spring Garden St., Phila., Pa.

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The professional satisfactions of the foot specialist are great. He uses his skills and education in a wide variety of healing situations, ranging from X-rays to surgery. As a Doctor of Podiatry or Surgical Chiropody, he has confidence in his knowledge and in his ability to help his patients. And his patients enjoy a respectful confidence in him.

WORK OPPORTUNITIES

As a podiatrist-chiropodist, you will have a variety of job choices. For example:

- PRIVATE PRACTICE, OR AS AN ASSOCIATE WITH ANOTHER FOOT SPECIALIST.
- INSTITUTIONAL APPOINTMENT, SUCH AS IN HOSPITALS, HOMES FOR THE AGED, CEREBRAL PALSY CENTERS, CLINICS, ETC.
- FOOT SPECIALIST IN AN INDUSTRIAL PLANT.
- INTERNSHIPS, POST-GRADUATE WORK AND TEACHING.
- RESEARCH
- COMMISSIONED OFFICER IN ARMY, NAVY OR AIR FORCE.

REQUIREMENTS FOR A DEGREE

Here are the academic requirements for a Doctor's degree in Podiatry-Chiropody:

Entrance requirements consist of four years of high school and one or two years of college-level work at an approved place of higher learning. Specific subjects required are English, Zoology or Biology, Chemistry and Physics.

A degree in Podiatry-Chiropody requires four years of study at a Podiatry-Chiropody school (see school listing inside). A minimum of 4,300 hours are devoted to classroom, laboratory and practical clinical instruction.

Tuition at a college of Podiatry-Chiropody — plus laboratory fees, books, etc. — varies from $600 to $750 per year.

If you wish information on borrowing a film on "Chiropody as a Career," write to:

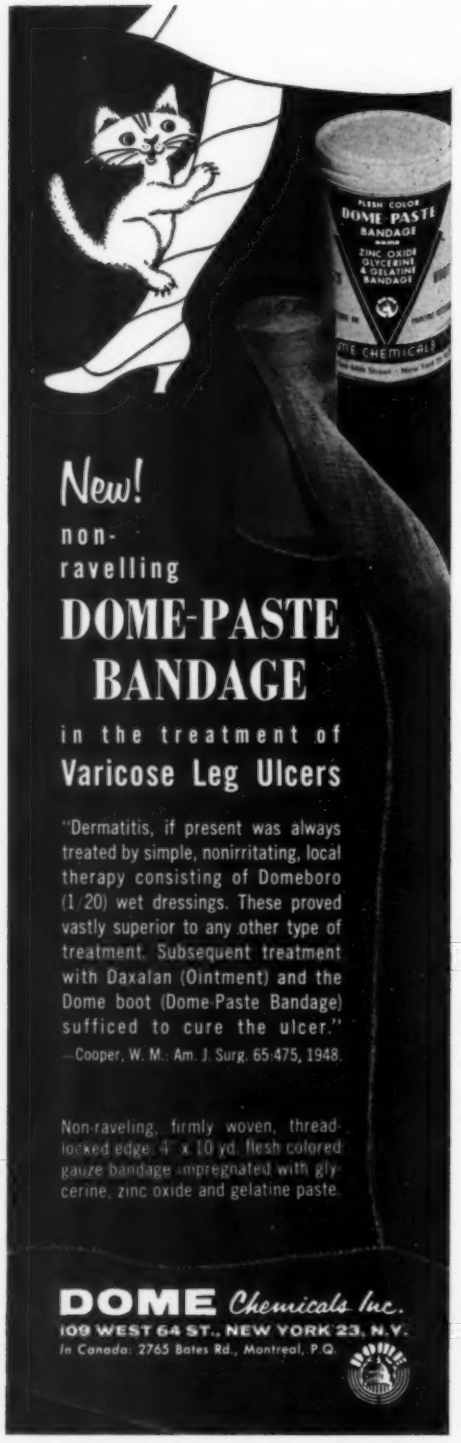
AMERICAN PODIATRY ASSOCIATION
(formerly National Association of Chiropodists)
3301 16th Street Northwest
Washington, D. C.

The **Vocational Guidance Committee** of the **American Podiatry Association** has recently issued the attached entirely new pamphlet to be distributed to students, parents and patients, informing them of our profession.

To make this pamphlet one of the best ever issued by the American Podiatry Association the Vocational Guidance Committee enlisted professional aid in the art work, layout and copy.

Our pamphlet, **"If You Are Planning a Professional Career"** is available from our Washington headquarters at the following **rates: 1,000—$15.00; 500—$8.00; 100—$1.75,** plus postage. With each order of 1,000, the American Podiatry Association provides **500 free** of charge, reducing the net cost to $10.00 per thousand.

↑ LIFT UP ↑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—Cooper, W. M.: Am. J. Surg. 65:475, 1948.
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ORGANIZATION NEWS

Secretaries of local, state, regional, affiliated, subsidiary and other related organizations are invited to submit copy for these columns.

ILLINOIS

Winners in Car Raffle

Drs. Nellie M. Dunn and Walter F. Jordanek, both of Chicago, were winners of the two automobiles raffled, September 17, at the regular meeting of the Illinois Chiropody Society in the Congress Hotel, Chicago.

Proceeds of the raffle will be used toward the development of a permanent exhibit on foot health to be installed in the Museum of Science and Industry.

When announcing the winners, Dr. Jack Stern, President of the society, stated that the planned exhibit has attracted widespread interest, with donations coming from the American Podiatry Association, other state chiropody societies and their women's auxiliaries.

The exhibit, now being developed by Winbush Associates, will include the figure of a transparent man, showing abnormalities of the feet and their relationship to involvement in other areas of the body. "The panels will contain audience participation gadgets, so that questions and answers on foot health will be heard," Dr. Stern stated.

Dr. George E. Guenzler, Freeport, Ill., President of the American Podiatry Association, was honored at the Illinois meeting.

Resolution Commends Congressman Mason

The Illinois Chiropody Society, at a recent meeting, adopted a resolution commending the Honorable Noah M. Mason on his stand before the House Ways and Means Committee regarding the Hospitalization and Surgical Insurance Section of the Forand Bill.

Congressman Mason, Oglesby, Ill., Fifteenth Congressional District, expressed his opinion that podiatrists-chiropodists are

licensed members of the health sciences. The resolution points out that this expressed opinion carries the Congressman's personal implication that licensed podiatrists-chiropodists should be included in any hospital or surgical insurance provided for eligible recipients under the Social Security Act.

A copy of the resolution, together with a letter from Dr. Jack Stern, president of the society, was sent to Congressman Mason. In his acknowledgment, he said, "I am glad that I could voice my opinion in your behalf when the Hospitalization and Surgical Insurance Section of the Forand Bill came before the Committee on Ways and Means, and I wish to thank you for the manner in which you have expressed your appreciation."

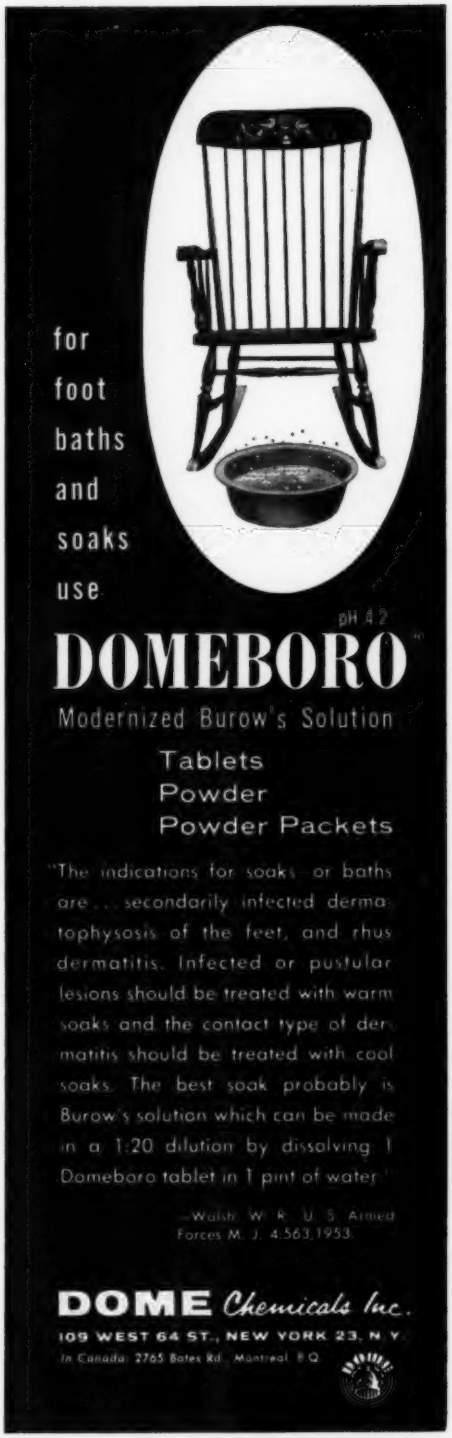
Zone III

The quarterly meeting of Zone III of the Illinois Chiropody Society was held September 20, 21, at the Custer Hotel, Galesburg, Illinois. Social activities, including golf, swimming, cocktail party and dinner, were held on Saturday. On Sunday the business sessions were held. The following appeared on the program: Dr. P. W. Patterson, Mattoon, Ill., "Verrucae Therapy with Galvanic Current," Dr. C. J. Meyer, Macomb, Ill., "Treatment of Heel Spurs," Dr. Art Mulnix, Sterling, Ill., "Influence of Orthopedic Stress on the Juvenile Personality," Dr. C. Arnett, Peoria, Ill., "Plantar Latex Shielding." Dr. George Guenzler, Freeport, Ill., "Podiatry-Chiropody, Philosophy of Practice, and A.P.A. Affairs."

At the conclusion of the scientific session, the Dr. Curry Meyer Annual Award Plaque was voted to Dr. Art Mulnix, Sterling, Illinois, for his lecture. Dr. Robert Shaw, Scientific Chairman, made the presentation.

INDIANA

At the fall meeting of the Indiana State Podiatry Association, held at the Marott Hotel in Indianapolis, October 4-5, 1958, the "Podiatrist of the Year Award for 1958"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"The indications for soaks or baths are . . . secondarily infected dermatophysosis of the feet, and rhus dermatitis. Infected or pustular lesions should be treated with warm soaks and the contact type of dermatitis should be treated with cool soaks. The best soak probably is Burow's solution which can be made in a 1:20 dilution by dissolving 1 Domeboro tablet in 1 pint of water."
—Walsh, W. R., U. S. Armed Forces M. J. 4:563,1953.
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was presented by the President, Dr. Richard R. Kannally, to Dr. Sidney P. Osborn of Fort Wayne. Dr. John R. Graham of Decatur, Illinois, lectured on Internal Medication, Pharmacology and the Steroids. The following officers were elected: President—Dr. M. L. Blood; First Vice President —Dr. D. T. Stouder; Second Vice President —Dr. D. A. Dickinson; Board of Directors— Drs. R. R. Kannally, W. D. Canada and C. W. Grinstead; Secretary-Treasurer— Dr. H. C. Winckelbach; Delegate — Dr. R. E. Tanner; Alternate—Dr. A. J. Deeley.

MASSACHUSETTS

At the annual meeting of the Massachusetts Chiropody Association on Sunday, October 5, the House of Delegates voted to change the name of the Association to Massachusetts Podiatry Society, effective immediately. The following officers were elected: President—Carlman Fisher, D.S.C.; President Elect—Maxwell P. Zide, D.S.C.; 1st Vice President—Anthony Polom; 2nd Vice President—Albert B. Reiss, Pod.D.; Executive Secretary—Sidney G. Holmes, D.S.C.

MICHIGAN

The Wayne County Chiropody Association met October 7, 1958, at Veterans Memorial Building, Detroit, Michigan, President Seymour Soloman presiding. A general discussion on plans for Foot Health Week was held by the members and the speaker for the evening was Dr. Earl Kaplan who lectured on "Child Foot Health Care," with case presentation. The Women's Auxiliary met at the same time to make plans for placing speakers on programs of several local high schools.

NEW MEXICO

Upon the death of Dr. Paul J. Stevens, President of the New Mexico Podiatry Society, Dr. Miller Lane, First Vice President has assumed the office of President for the remainder of the year.

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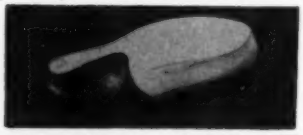

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fare, the September issue of "Aging" advised its readers about the pamphlet "Your Podiatrist's Advice on 'Middle-Aged' Feet," prepared by the Podiatry Society. In the first two weeks following the publication of this notice, several hundred requests for copies of the Podiatry Society pamphlet were received from community groups, health organizations, universities, several state health and welfare agencies, and many others.

The recognition of the podiatrist as a foot specialist by the United States Department of Health Education and Welfare is, of course, another major step forward in the complete integration of podiatry within the community health program. This goal of community health integration has long been a major aspect of the Podiatry Society's public information program.

As our campaign continues, copies of other Podiatry Society literature on general foot care, care of the diabetic and child foot care will individually be made available to health and community groups throughout the country.

PENNSYLVANIA

Chiropody Society of Pennsylvania

The regular monthly meeting of the Northwestern Division was held Sunday, September 21, at the Greenville Country Club, Greenville, Pa. Dr. and Mrs. Ted Huels served as hosts. Sixty-five chiropodists and their wives attended the meeting held in honor of Dr. and Mrs. Ralph Dye. Dr. Huels presented the Wing Foot Award to Dr. Dye for "outstanding, unselfish, and devoted service to the profession of chiropody." "As You Think Today, You Shall Be Tomorrow" was the theme of Dr. Dye's remarks following the presentation.

Following the ceremony, a business meeting was held with President Leo Nelson presiding.

Philadelphia Chiropody Society

The monthly meeting of the Philadelphia Chiropody Society was held on Tuesday, September 30, at the County Medical

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Building. Alvin Green, D.S.C., Guest Speaker, demonstrated and lectured on "Celastic Casting." Dr. I. Daniel Greenfield was scientific program chairman.

Western Division

The September business meeting of the Chiropody Society of Pennsylvania, Western Division, was held at the Hotel Webster Hall in Pittsburgh, Dr. Arthur Schultz presiding. The following appeared on the scientific program: Dr. A. A. Wolf, "Use of Celastic to Make Removable Casts for Toe Fractures and Joint Injuries of the Foot," Dr. Robert Nicklas, "Casting for Metatarsus Varus," Dr. Martin Serbin, "Applications of a Walking Cast."

SOUTH DAKOTA

The semi-annual meeting of the South Dakota Association of Chiropodists was held at Aberdeen, S. Dak., on the 13th and 14th of September. The business meeting was held on the 14th and the following officers were elected: President—Dr. Robert Lee; Vice President —Dr. M. I. Avery; Secretary-Treasurer—Dr. M. D. Scofield. Drs. E. Laga, E. Shindler, and F. W. Unzicker were elected to the board. Dr. Viola Marr is the A.P.A. Delegate and Dr. M. D. Scofield, the Region Six Delegate. The featured speaker was Dr. Herbert W. Liebold of St. Paul, Minnesota.

REGION 12

The Western Chiropody Congress (Region 12) is making plans to hold its 1963 meeting in Hawaii.

A unique prepaid plan has been established whereby monthly payments may be made to a fund for the trip, thus giving the member a chance to prepay his trip on an enforced saving plan.

Members of the A.P.A., their wives and children may be included. For further details, please write immediately to: Alfred G. Roos, D.S.C., 209 Post Street, #412, San Francisco 8, California.

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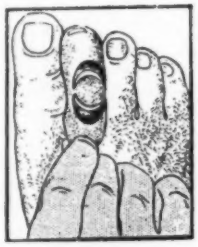

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American Podiatry Association
New York, N. Y.
August 14-18, 1959
Waldorf-Astoria Hotel

Region One
(Conn., Maine, Mass., N. H., R. I., Vt.)
Boston, Mass.
Sept. 25-27, 1959
Sheraton Plaza Hotel

Region Two
(New York)
New York, N. Y.
Feb. 20-22, 1959
Barbizon Plaza Hotel

Region Three
(Del., Md., N. J., Pa.)
Atlantic City, N. J.
May 7-10, 1959
Ambassador Hotel

Region Four
(Ohio)
Columbus, Ohio
May 21-23, 1959
Deshler-Hilton Hotel

Region Five
(Ill., Ind., Mich., Wis.)
Chicago, Ill.
March 20-22, 1959
Morrison Hotel

Region Six
(Colo., Iowa, Kan., Minn., Mo., Nebr., N. Dak., S. Dak.)
Kansas City, Kans.
April 10-12, 1959
Town House Hotel

Region Seven
(Idaho, Mont., Oreg., Wash., Wyo.)

Region Eight
(D. C., N. C., S. C., Va., W. Va.)
Norfolk, Va.
June 10-15, 1959
Aboard M. V. Arosa Sun

Region Nine
(Florida)

Region Ten
(Ala., Ga., Ky., Miss., Tenn.)

Region Eleven
(Ark., La., N. Mex., Okla., Texas)

Region Twelve
(Ariz., Cal., Nev., Utah)
Western Chiropody Congress
San Francisco, Calif.
May 29-30, 1959
Mark Hopkins Hotel

American College of Foot Surgeons
Las Vegas, Nev.
Feb. 16-18, 1959
Riviera Hotel

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COMMUNICATIONS FROM THE PROFESSION

To the Editor:

Plans are being contemplated for the formation of a psychosomatic podiatry-chiropody and medical hypnotic society in our profession, and those who are interested in these subjects are invited to write to me and supply the following information: (1) Number of years in practice; (2) Courses attended in medical suggestion and hypnosis; (3) Private and original research in hypnosis; (4) Work published on this subject; (5) Number of years you have used it in your practice.

This information will be kept confidential, and those who write will be placed on the mailing list and kept informed on the progress being made in the formation of this society.

It is hoped that, with the aid of those who are vitally interested in this subject, we will be able to hold our first meeting at the next Annual Meeting of the National in New York. At this time we will adopt by-laws, constitution, and elect the first officers.

Such an organization will permit those who are using hypnosis to exchange ideas and experiences, and the correlation of individual techniques and therapeutic approaches will be beneficial to the entire membership.

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YOUTH FOOT CARE WEEK INITIATED

The first of what is expected to be more than a half million school boys and girls to be examined during Youth Foot Care Week, are examined in a special ceremony, October 1, 1958, in the office of Dr. Shane MacCarthy, Executive Director of President Eisenhower's Youth Fitness Council.

Dr. Bernard Laps, Coordinator of the Washington metropolitan area program, is examining the feet of Daniel Shuffle, 10, and Diane Taylor, 10.

Looking on are (left to right) William Blaisdell, Chief, Division of District of Columbia Public Health Education, Dr. Carl Troester, Executive Secretary, American Association of Health, Physical Education and Recreation of the National Education Association, Dr. Shane MacCarthy and Dr. Sidney Hirschberg, President of the American Foot Health Foundation.

Also attending the ceremony and participating in the press conference following the ceremony, were Mr. Edgar Caswell, Director of Public Relations for the President's Council on Youth Fitness, Dr. Abe Rubin and Dr. Seward P. Nyman, Chairman of the American Podiatry Association Youth Fitness Committee.

YOUTH FITNESS IN ACTION

The desire to translate interest in Youth Fitness into action, and action into tangible results, is the subject of many letters from members throughout the country. To coordinate this interest, periodic articles will appear in the Journal with suggestions for programs and will include reports of local planning and results of activities. For example, Dr. W. A. Pepin of San Diego, California, took an active part in the recent Youth Fitness Conference in that city and is serving with other groups in that area concerned with activating an effective program for Youth Fitness. It is requested that all reports be addressed to the Youth Fitness Committee, American Podiatry Association, 3301 16th St., N. W., Washington 10, D. C.

A principal contribution to Youth Fitness and of immediate interest to us is the Youth Foot Care Program, sponsored by the American Foot Health Foundation in cooperation with the President's Council on Youth Fitness. In order to be an effective force for fitness, in addition to the survey, there must be adequate facilities maintained for the clinical care of those children unable to obtain private treatment. Also, the effectiveness of the program must be evaluated through follow-up surveys. Full reporting of this program is important to school and community health officials and the American Foot Health Foundation. Future planning and research will be influenced by careful and complete reporting.

As a member of the A.P.A., YOU are a member of this Youth Fitness Committee and through existing organizations, whether they be professional, civic, service, school, church or social, the local fitness program should be planned according to the particular needs of YOUR community. We should be interested in all segments of the fitness theme and, as responsible citizens, concerned with this vital public service.

WOMEN'S AUXILIARY MESSAGE

May I again bring to your attention the importance of your wife joining the Auxiliary? Recently at the very wonderful convention in Washington, D.C., there were some interesting points brought out as to why some of the wives did not belong. Would you like to hear some of them?

First (and the one that has caused me a great deal of consternation), "My husband does not want me to belong." When asked the reason, very vague answers were given. Can you give me a valid reason? I am definitely interested. I want reasons in black and white so we may study them and find the answers.

Second, "The organization does not do anything." My answer to that is, if we had more interested members with ideas, etc., we could accomplish more. Also, those who are not members do not know just how much we do accomplish. Let me site, first and foremost, our very informative pamphlet. The distribution has been very rewarding. This alone took much time, worry and money before it was accomplished.

Third, "We just can't seem to get the women interested." Have you honestly tried? Perhaps you thought about it at the time you read my previous article and truthfully intended to do something about it, but with other things coming up and pressures from other sources this is something easily delegated to the file of "Things to Do." BUT WHEN?

Fourth, "No one wants to be an officer." My answer to that is, start out with a social group. You'll be surprised how soon one woman who shows signs of leadership will be found, and before long you will have officer material.

Fifth, "We just don't have any projects." I have yet to see a group of women together for very long before someone comes up with an idea for a very worthwhile project.

Recently I read an editorial in one of your current magazines concerning the "Plight of the Colleges." In this article the author stated, "The solution, as we see it, lies in a well-conducted, adequately financed public relations program." Let me assure you, a very good public relations source is being overlooked when you overlook the Auxiliary, and one without cost.

"LIFE'S FOUNDATION — YOUR BABY'S FEET" is an outstanding and comprehensive booklet on the growth and care of children's feet. Written for the layman, it is concise, cleverly illustrated and will prove valuable especially to the parents of young children. Many Podiatrists-Chiropodists have received a copy of this booklet and have ordered them in quantity. For those of you who have not ordered and for those who wish to reorder, please clip the order blank below and mail with your check for your supply.

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Check payable to Women's Auxiliary, APA, in the amount of $_____is enclosed.

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SEE THE EXHIBIT AT YOUR REGION CONVENTION

Now, make a note on your pad of "Things to do Today" to talk to your wife concerning the Auxiliary. Show her you really are interested and want her to be interested also. We will be able to tell which of you is really interested by the number of new members acquired in the near future. On which of my lists will your name appear?

Thelma Cooper, R. N., Pres.

STATEMENT OF OWNERSHIP

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF

The Journal of the American Podiatry Association, published monthly at Boston, Mass., for Oct. 1, 1958.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, American Podiatry Association, 3301 16th St., N. W., Washington 10, D. C.; Editor, A. Rubin, D.S.C., 3301 16th St., N. W., Washington 10, D. C.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.) Dr. George E. Guenzler, President, 302 Smith Building, Freeport, Illinois; Dr. Marvin W. Shapiro, President-Elect, 1059 Spitzer Building, Toledo, Ohio; Dr. A. Rubin, Secretary, 3301 16th Street, N. W., Washington 10, D. C.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.)

Signed A. Rubin, D.S.C., Editor

Sworn to and subscribed before me this 26th day of September, 1958. Sol Levine. (My commission expires Oct. 1, 1959.)

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DEATHS REPORTED

Sherman R. Beattie
Eugene, Oregon

Ida C. Larson
San Francisco, Calif.

Dr. Larson died at the age of 90 on September 17, 1958 in San Francisco, Calif. She was one of the first women to practice chiropody-podiatry in the United States, practicing in St. Paul, Minnesota, from 1900 to 1915 and in Phoenix, Arizona, from 1933 to 1935.

Harris R. Mark
Fargo, N. D.

Elmer E. McIntyre
Hollywood, Fla.

Frank Mendicino
Cheyenne, Wyo.

Paul J. Stevens
Albuquerque, N. M.

Dr. Stevens, President of the New Mexico Podiatry Society, died suddenly of a heart attack while in his office. He was 53 years of age.

Charles Strahle
Philadelphia, Pa.

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ANNOUNCEMENT

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MOOD ELEVATORS

Contributions to this column are more than welcome. In fact it depends upon them.
A.O.P.

There are two reasons why I will not accept an extended vacation. The first reason is that if I quit writing my column for six months it might affect the circulation of your newspapers. The second reason is that it might not.

Arthur Brisbane to W. R. Hearst

"Dad," said son Jimmie, "what's the difference between a hill and a pill?"

"I wouldn't know, Jimmie," replied Dad from behind his paper. "What is the difference?"

"A hill is harder to get up but a pill is harder to get down."

Vagrant Thought: If you can't get away for a vacation try tipping every third person you see. It will give you the same feeling.

A Conference is a group of people who individually can do nothing, but who meet collectively and agree that nothing can be done.

"Glossary of Federalese" quoted in SELL

The advantage of a classical education is that it helps you to despise the wealth it prevents you from earning.

Glasgow Evening Times

It is same as Indian cutting off top of blanket and sewing it on bottom to make blanket longer.

Navajo explanation of Daylight Saving

A bustle is like an historical romance; both are fictitious tales based on stern reality.

Sterling North

Conscience doesn't keep you from doing anything wrong—it just keeps you from enjoying it.

Judge

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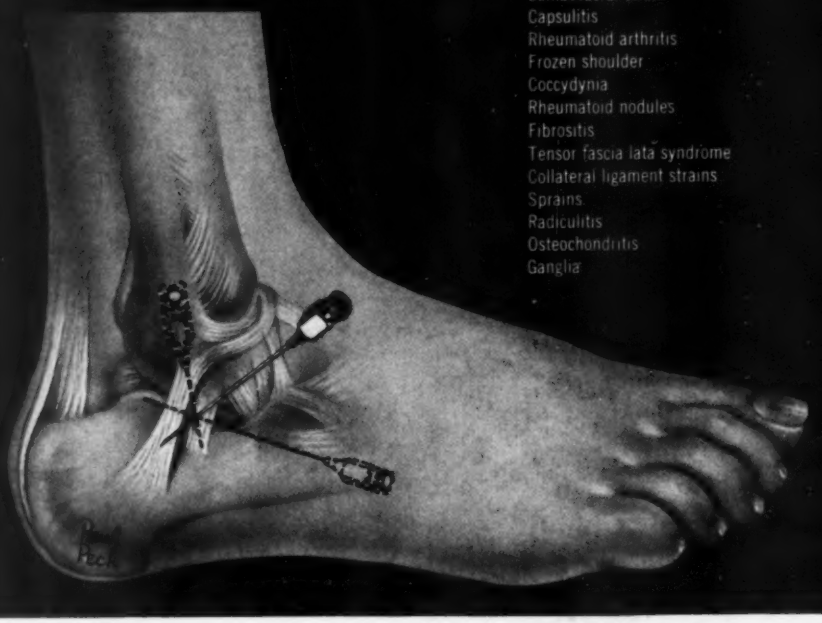

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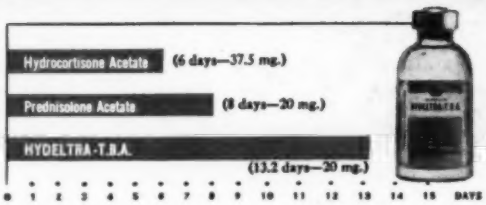
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